

ADDENDUM: Comprehensive Statewide E9-1-1 Telecommunications Plan

Selective Routers in North Carolina





ADDENDUM:
Comprehensive Statewide E9-1-1
Telecommunications Plan

Selective Routers in North Carolina

October 17, 2008

Trademark Ownership

All trademarks used herein are the property of their respective owners.

Corporate Ownership

Intrado is a wholly owned subsidiary of West Corporation.

Contents

1. SELECTIVE ROUTER NETWORK CONNECTIONS IN NORTH CAROLINA..... 1

1.1. BASIC UNDERSTANDING OF NORTH CAROLINA TELECOMMUNICATION NETWORK..... 1

1.2. 9-1-1 SELECTIVE ROUTER NETWORK CONFIGURATION..... 5

1.3. SELECTIVE ROUTER DETERMINATION 6

1.4. UNDERSTANDING THE DIAGRAMS 7

2. SELECTIVE ROUTER DIAGRAMS..... 10

List of Figures

FIGURE 1: NORTH CAROLINA LATA BOUNDARIES.....3

FIGURE 2: NORTH CAROLINA RATE CENTERS.....4

1. SELECTIVE ROUTER NETWORK CONNECTIONS IN NORTH CAROLINA

This addendum provides the North Carolina 911 Board (the Board) with diagrams of the existing 9-1-1 network in North Carolina. All diagrams appear in Section 2 of this addendum. Section 1, *Selective Router (SR) Network Connections in North Carolina*, provides some background on the creation of the diagrams as well as how the diagrams are intended to be used. For each county the diagrams include the connections for each rate center to a serving selective router or multiple selective routers. They also include the 9-1-1 service provider and primary PSAP(s).

The diagrams are intended to serve as operational tools for the Board as it executes its oversight duties as a statewide coordinator and resource. It is likely that changes to the current system configurations will be made and updates will be required. These diagrams are intended to be living documents and updated in accordance with any changes to network designs by Board personnel or someone contracted by the Board.

Since the LEC carriers declined to participate in the carrier surveys, information pertaining to selective router coverage should be validated with the 9-1-1 LEC service providers for accuracy.

Input to development of the diagrams included information from the PSAP survey conducted by Intrado, North Carolina NENA website¹ which provides a picture of the 9-1-1 service provider's selective router coverage, as well as other industry resources.

1.1. Basic Understanding of North Carolina Telecommunication Network

There are 100 counties in North Carolina, and those 100 counties are served by the 20 selective routers listed in the core assessment report, *North Carolina Assessment and Recommendations, Volume 1*. Included in each diagram is the primary selective router (or additional selective routers if multiple), the primary PSAP(s) associated with the primary selective router, and all rate centers located fully or partially within the county border.

Before delving into a description of the diagrams, let us first consider the North Carolina telecommunication network. The state is subdivided by Local Access Transport Areas (LATAs) and rate centers (see Figures 1 and 2 on the following pages). A LATA is defined as "a geographic area within a telephone company's franchised territory which has been established in accordance with the [Modification of Final Judgment \(MFJ\)](#) for the purpose of defining the area within which a telephone company may offer services."²

¹ http://www.ncnena.org/wireline_9-1-1_in_nc.htm, accessed 6-23-08

² LATA and rate center definition from <http://www22.verizon.com/wholesale/glossary>

Seven North Carolina LATAs are defined:

- 420-Asheville
- 422- Charlotte
- 424 - Greensboro
- 426 - Raleigh
- 428 - Wilmington
- 949 - Fayetteville
- 951 - Rocky Mount

In addition to those LATAs, there are four non-North Carolina LATAs—250-Richmond, VA; 252-Norfolk, VA; 430-Greenville, SC; and 474-Knoxville, TN—whose rate centers cross state borders but are served by North Carolina selective routers. Also, LATA 472-Chattanooga, TN, has a rate center that is split between North Carolina and Tennessee but, in this case, the Tennessee selective router serves the rate center.

There are over 400 rate centers throughout the state (*see Appendix for full list*). A rate center is defined as a “specific geographic point and corresponding geographic area that are associated with one or more particular NPA/NXX codes that have been assigned to a local exchange carrier for its provision of exchange services. The geographic point is identified by a specific coordinate that is used to calculate distance-sensitive end user traffic to/from the particular NPA/NXX associated with the specific Rate Center.” In layman’s terms, this simply means a way that the service providers determine how much to charge their subscribers.

Rate centers always stay within LATA boundaries but can cross county and state borders, so some of what is presented may seem confusing unless this is kept in mind.

In addition, there are currently seven area codes defined in NC: 252, 336, 828, 910, 919, 704 and 980. Area code 980 is an overlay, meaning it covers the same geographical area as another area code. Typically, selective routers serve no more than 4 area codes because of limitations with the traditional 8-digit PSAP trunk signaling. By viewing the diagrams it can be determined which area codes as well as LATA and rate centers are served by the selective router.

Rate centers used for wireless calls do not necessarily map to the same selective router as what is shown in the diagrams. Wireless emergency calls use pseudo Automatic Number Identification (pANIs) and route to selective routers based on cell tower locations, not by the subscriber’s phone number which corresponds to their fixed location as is done with wireline. Determining cell tower locations within the counties to selective router mapping requires input from the 9-1-1 service provider. This may be an item the Board adds to the report at a later date. As a note, since area code 980 appears to be an over-lay used just for wireless subscribers, it will not be found in any of the diagrams.

North Carolina LATA Boundaries

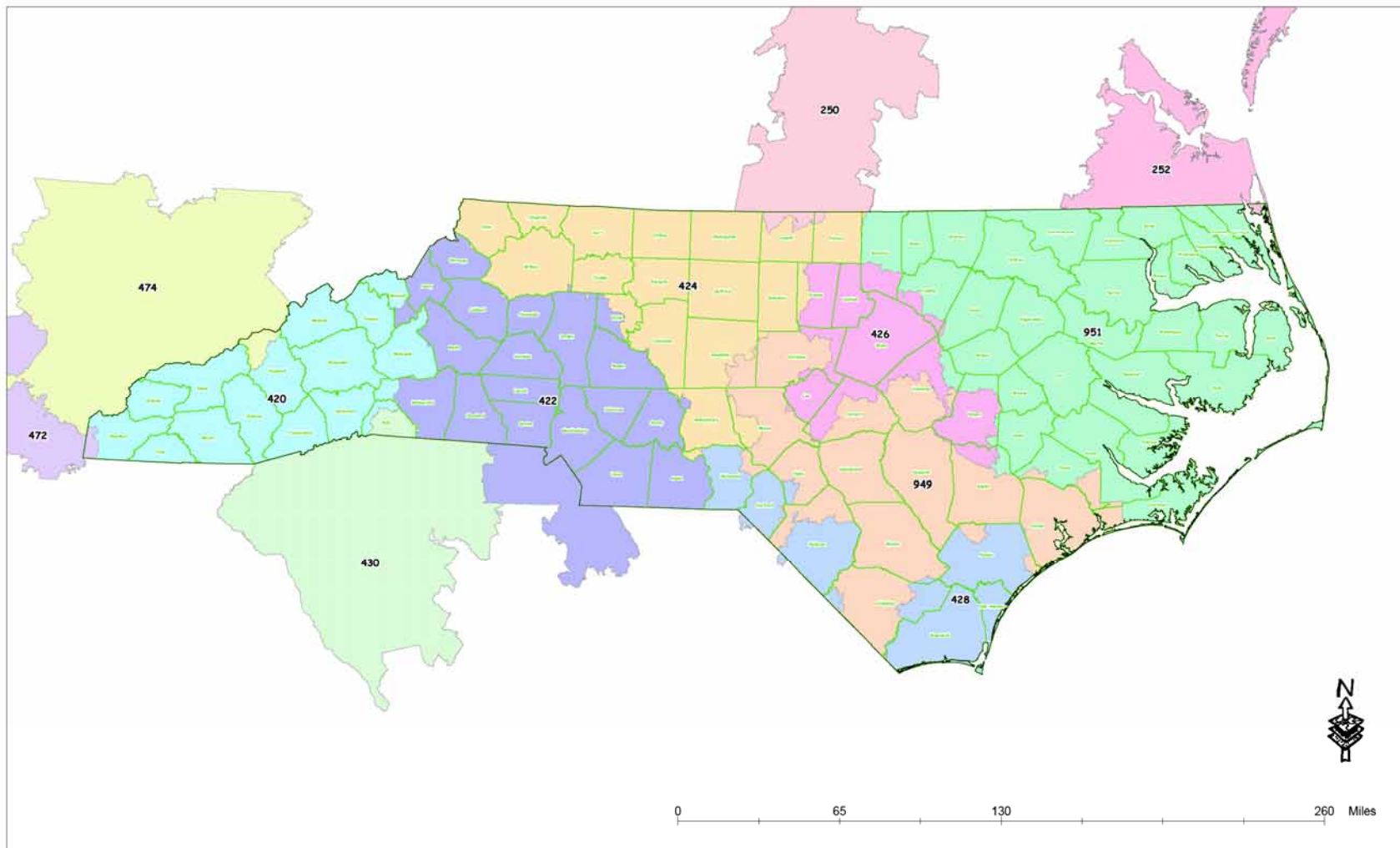


Figure 1: North Carolina LATA Boundaries

North Carolina Rate Centers

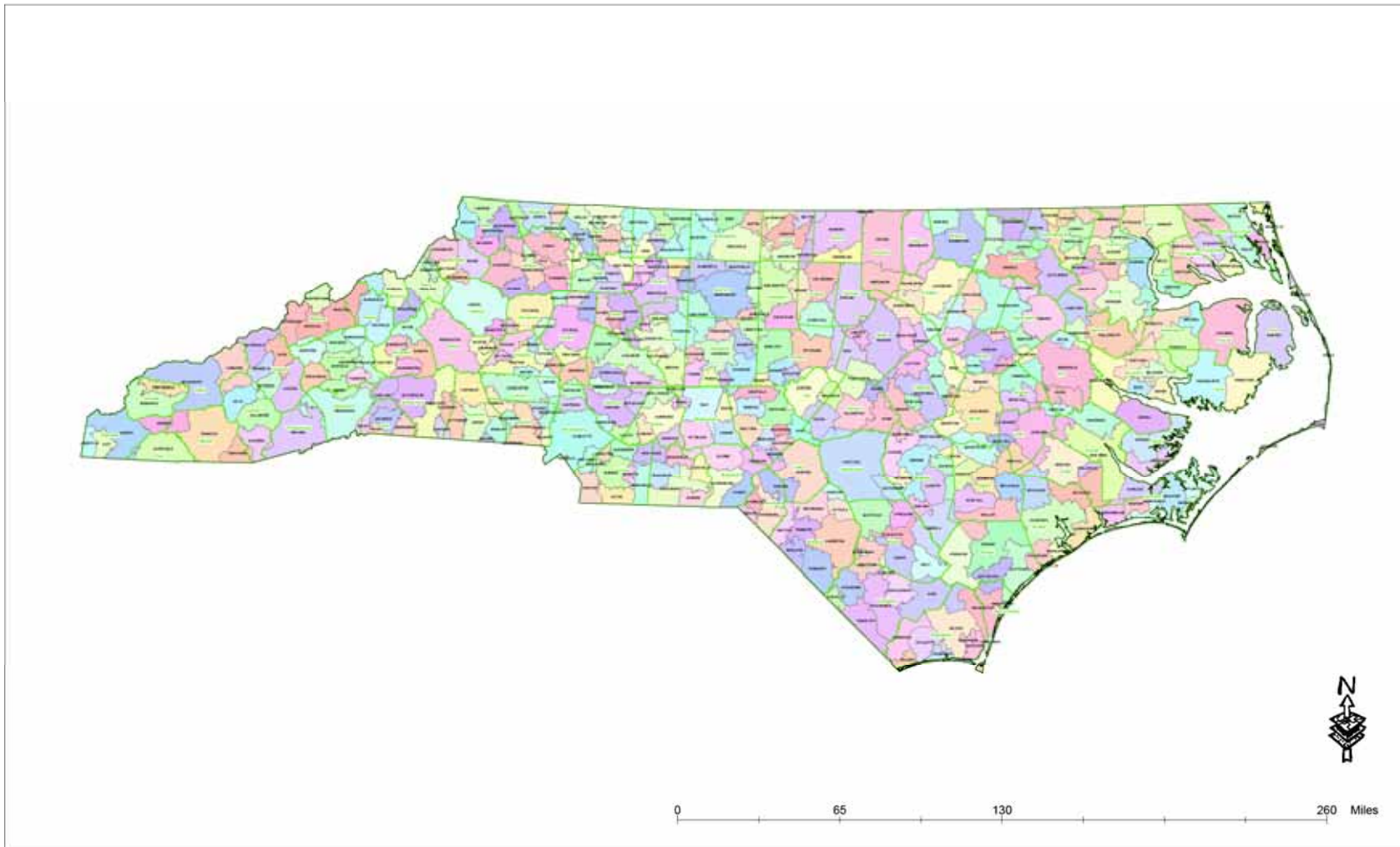


Figure 3: North Carolina LATA Boundaries

1.2. 9-1-1 Selective Router Network Configuration

The primary 9-1-1 service providers are AT&T, Verizon and Embarq. AT&T's typical 9-1-1 networks ensure multiple paths to selective routers. They may use mated selective router pairs or fail-over to an alternate selective router. Verizon's typical 9-1-1 network consists of mated paired selective routers. Both of these providers traditionally provide yet a third route from every end office to reach a selective router when the first two paths are not available. From the PSAP survey, it also appears that Embarq also has redundancy built into their network, similar to AT&T and Verizon.. The actual network configuration for each of the 9-1-1 LEC service provider requires their input for confirmation.

By going through the county diagrams, it can be observed that within the primary 9-1-1 service provider networks, there is almost always another selective router that is inter-connected. This shows that inter-tandem connections currently exist within North Carolina and can set a precedence for the Board for inter-tandem access for transfers.

It is not known what type of 9-1-1 network configuration the two independent 9-1-1 service providers—Citizens Telephone and Windstream—have or if the serving switch is a selective router. The switch used to process the 9-1-1 calls can only be a selective router if it has the E911 feature active and used to route the 9-1-1 calls. It may be, to be confirmed by those 9-1-1 service providers, that the 9-1-1 calls are direct trunked to the PSAP via their serving switch.

1.3. Selective Router Determination

In order to determine the rate center to serving selective router, several methods were used:

- PSAP Survey – included the primary selective router, 9-1-1 service provider and PSAP(s)
- LERG (or Local Calling Guide) – industry resources used to determine ownership of NPA-NXX for each rate center. Where rate center ownership was the LEC Embarq or Verizon, assumed the selective router was provided by one of them, unless results of the AT&T query tool (next bullet) showed NPA-NXX to be handled by AT&T.
- AT&T Wholesale provides a tool to determine AT&T selective routers based on the NPA-NXX, tool located at <https://apps.wholesale.att.com/npanxx/index.jsp>³. This tool was used to determine AT&T selective routers for the state of North Carolina.

Each rate center and NPA-NXX was evaluated to determine primary selective router ownership.

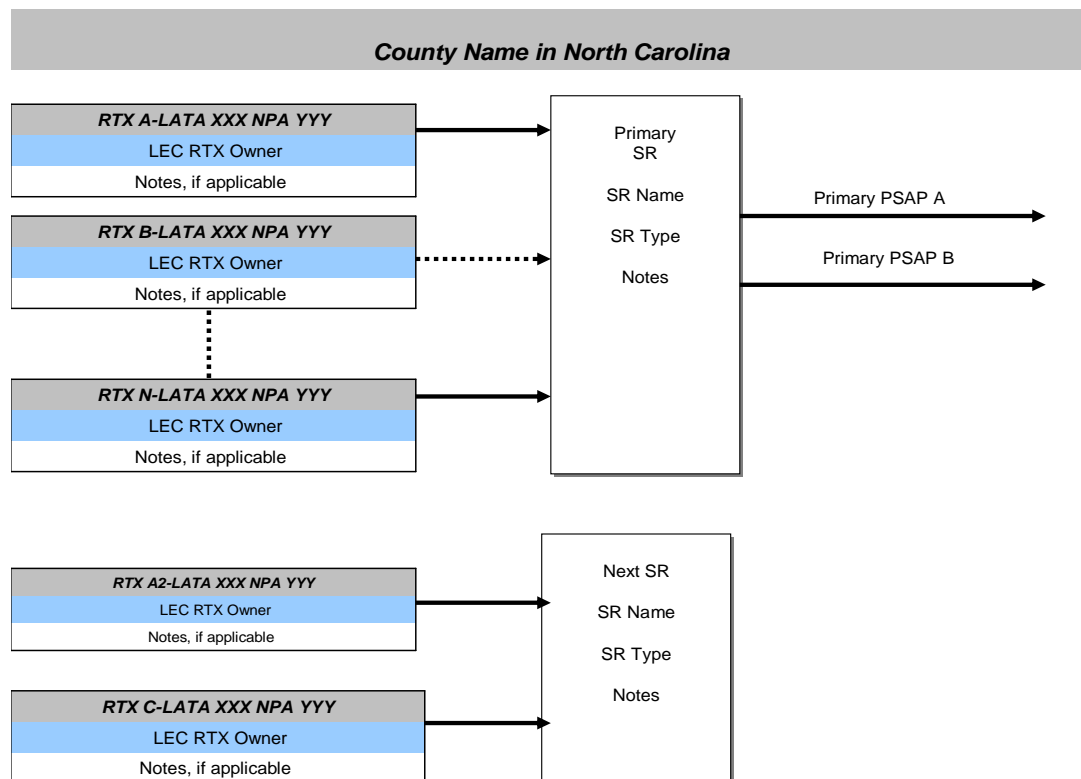
³ AT&T wholesale website access 6-23-2008

1.4. Understanding the Diagrams

Acronyms used in diagrams:

- CLLI⁴ – Common Language Location Identifier Code; unique identifier for a network switch, 11 character code
- EOC – Emergency Operations Center
- LATA – Local Access Transit Area
- LEC – Local Exchange Carrier
- NPA – Number Plan Area; also known as area code
- RTX – Rate Center
- WLS – Wireless
- VoIP – Voice over Internet Protocol

1.4.1. Example Diagram



⁴ For further details of CLLI: http://en.wikipedia.org/wiki/CLLI_code, information retrieved June 23, 2008.

1.4.2. Diagram Interpretation

Diagram Object	Meaning
County Name	Name of county pertaining to the diagram
Rate Center (RTX) Box	<p>RTX name (alphabetical order), LATA in which the RTX is located and NPA (Area Code)</p> <p>LEC RTX Owner – this is the LEC responsible for this particular RTX. There may be other telecommunications providers listed in a RTX but they are not the over-all owners.</p> <p>Notes - Clarifying notes that pertain to the RTX, if applicable.</p>
RTX B box	Next RTX in county – same information
RTX–N box	Continued list of RTX for this particular selective router
RTX Aa box	The same RTX may be split between two selective routers. This may be because part of the RTX over-laps into another county and those subscribers are located there or agreements between selective router service providers. Refer to the notes corresponding to the box.
RTX C	RTX in county but served by a different selective router. Refer to the notes corresponding to the box.
Primary SR Box	<p>Primary SR – The first selective router shown in the diagram and confirmed with the PSAP survey as the serving selective router for the county.</p> <p>SR Name – this includes the CLLI code and name of the selective router</p> <p>* – Use for Embarq to indicate the SR(s) specified in the PSAP survey.</p> <p>DMS or ECS – type of selective router</p> <p>Notes – Clarifying notes pertain to selective router or RTX connections</p>
Next SR	Same information as Primary selective router. This selective router was listed as serving the RTX but not confirmed in the PSAP survey as serving the county. Refer to the Notes below this table.
Solid Lines	Selective router serves the RTX
Dashed lines	Selective router not confirmed for the RTX but most logical selective router.
Primary PSAP (A/B)	Primary PSAP(s) in this county for the selective router. There may be more than two. Typically there is only one primary PSAP in a county.

1.4.3. NOTES Used within Diagrams

NOTE 1 – PSAP connections to selective router RCMTNCXA1ED - Old Rocky Mount are transitioning to RCMTNCXA9ED - Rocky Mount⁵. Some PSAP connections may also be transitioning to Clinton (confirmation required by Embarq 9-1-1 service provider).

NOTE 2 – PSAP survey indicates selective router serves both wireless and VoIP subscribers for emergency calls in the area.

NOTE 3 – No information on the PSAP survey indicating WLS/VoIP subscribers emergency call handling in county for selective router.

NOTE 4 – The rate center crosses county borders. The primary selective router for this rate center is most likely located in a bordering county. PSAP survey does not list this selective router. Since rate centers are not usually split between selective routers, it's most likely a case of hand-off – connection from non-primary selective router noted in the diagram to the county selective router(s). Hand-off is the routing from one selective router to another in such a way as the second router performs selective routing on the incoming call. Typically, the handoff from the first router makes the 9-1-1 call appear to the second selective router as an initial 9-1-1 call; delivering the call in a way that the E9-1-1 routing function will be performed

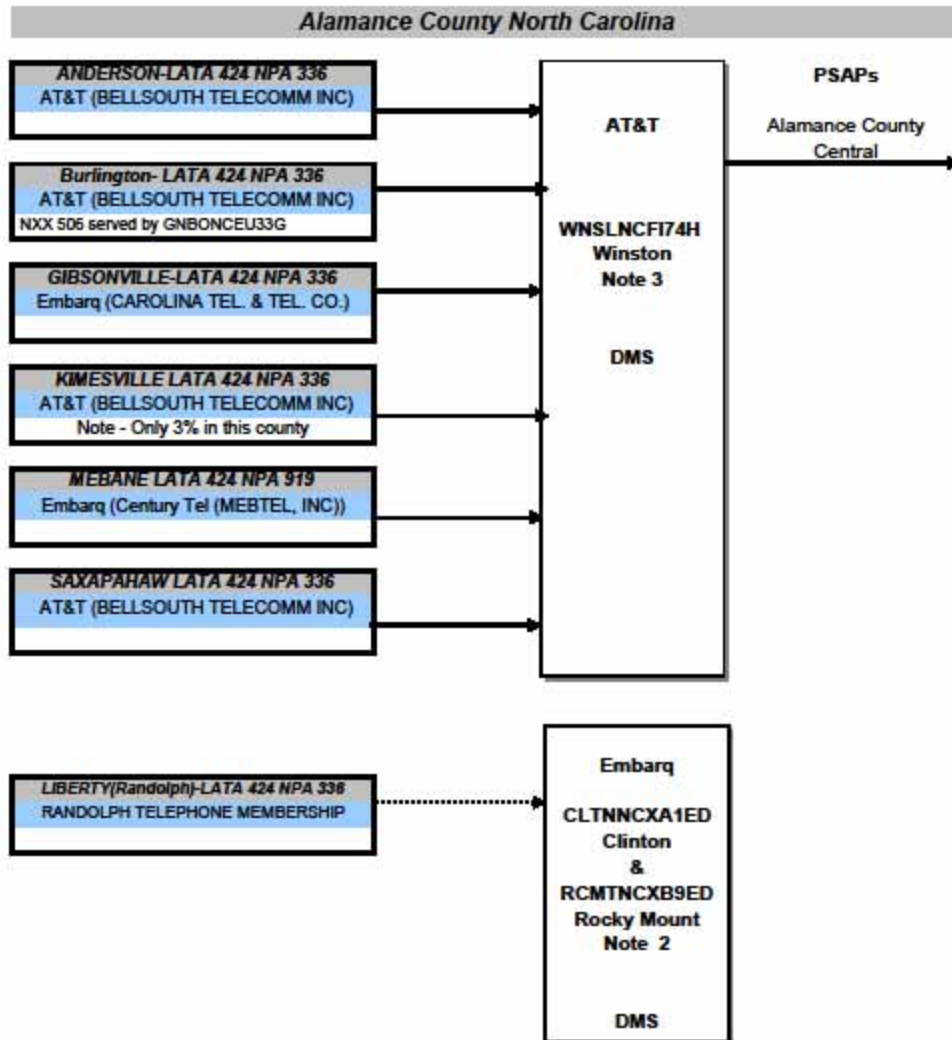
NOTE 5 – The rate center is located mainly or fully in the county but the selective router for that county is not listed as a primary selective router per the PSAP survey. The AT&T E9-1-1 query tool confirms the NPA-NXXs for the RTX as being served by the AT&T selective router listed in the diagram. This could be a case of “hand-off”, or agreements between the 9-1-1 service providers (confirmation required by 9-1-1 service providers).

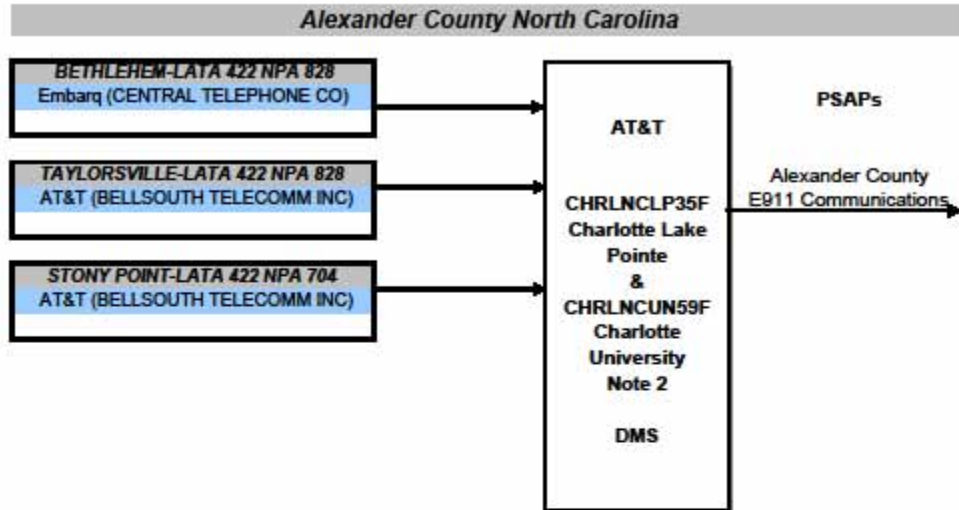
NOTE 6 – The North Carolina NENA selective router pictorial of the network was used to determine the selective router since no other resource provided this information.

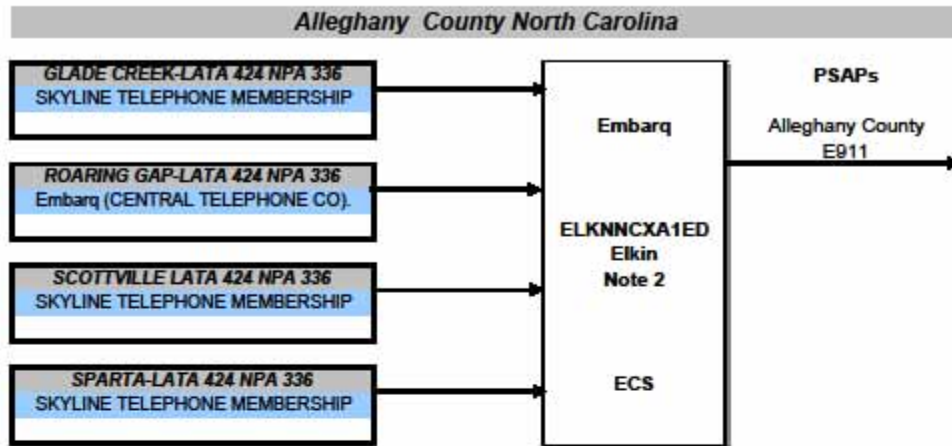
Where additional clarification is required, notes are included in the boxes to which they pertain.

⁵ Intrado has determined that Embarq is currently moving all PSAPs from Old Rocky (RCMTNCXB1ED) to Rocky Mount (RCMTNCXB9ED).

2. SELECTIVE ROUTER DIAGRAMS

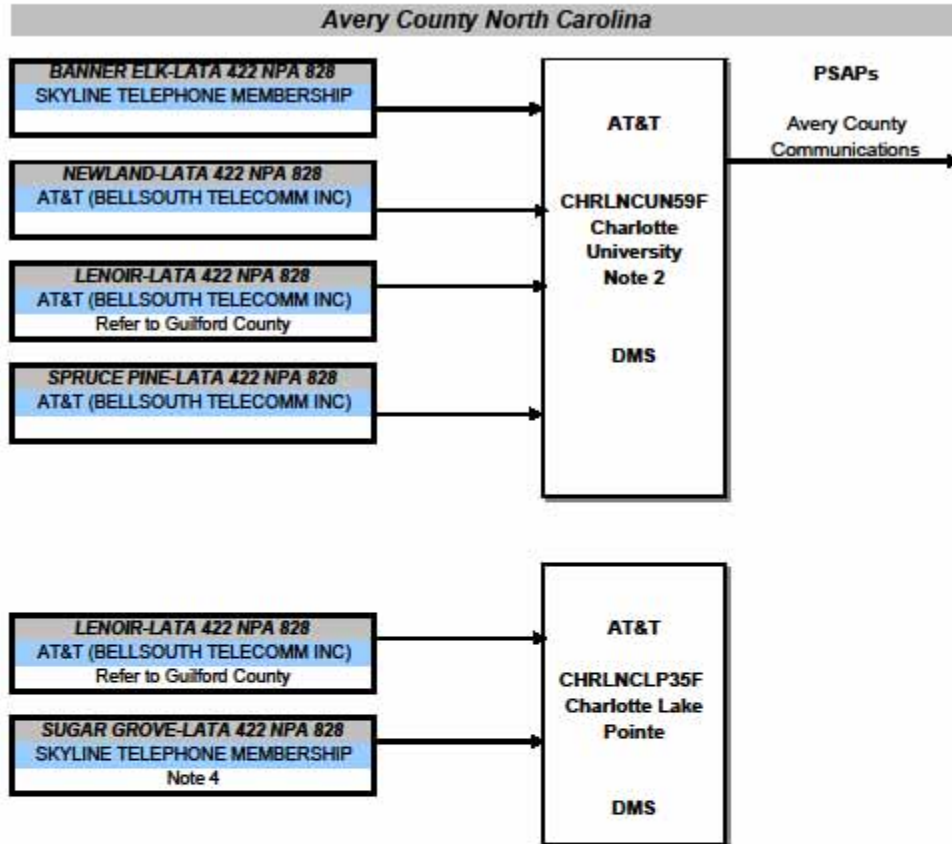


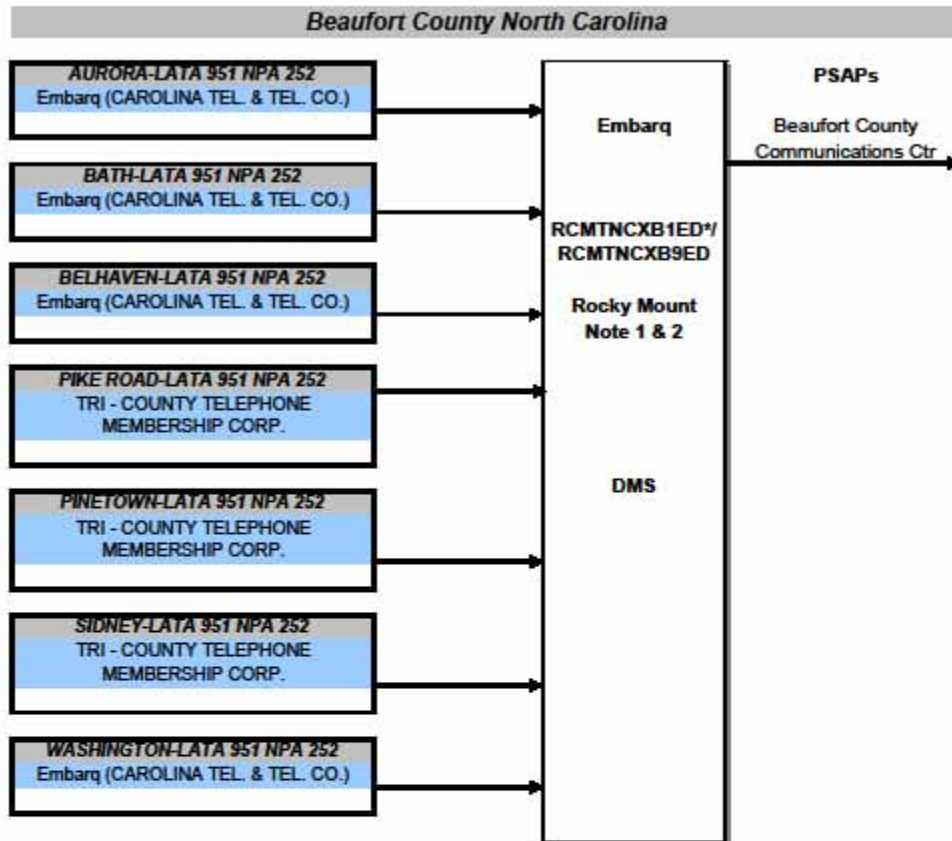


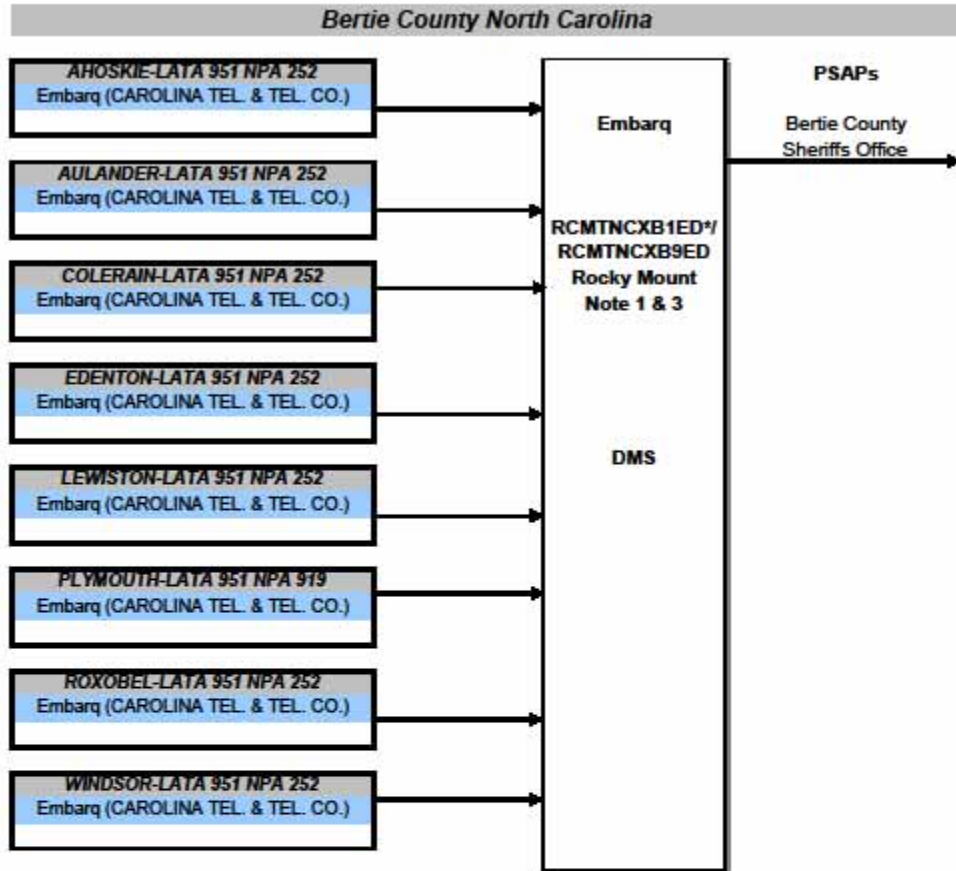


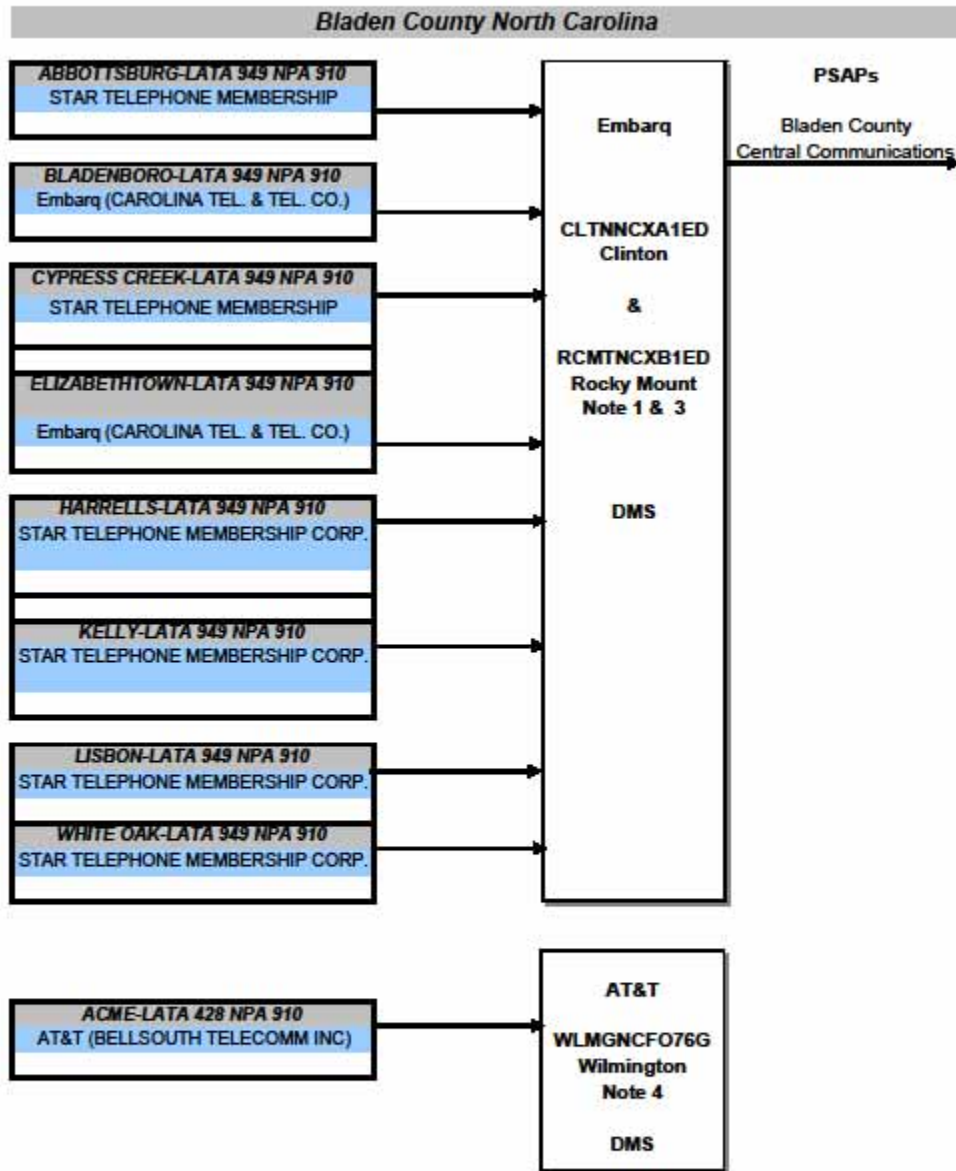


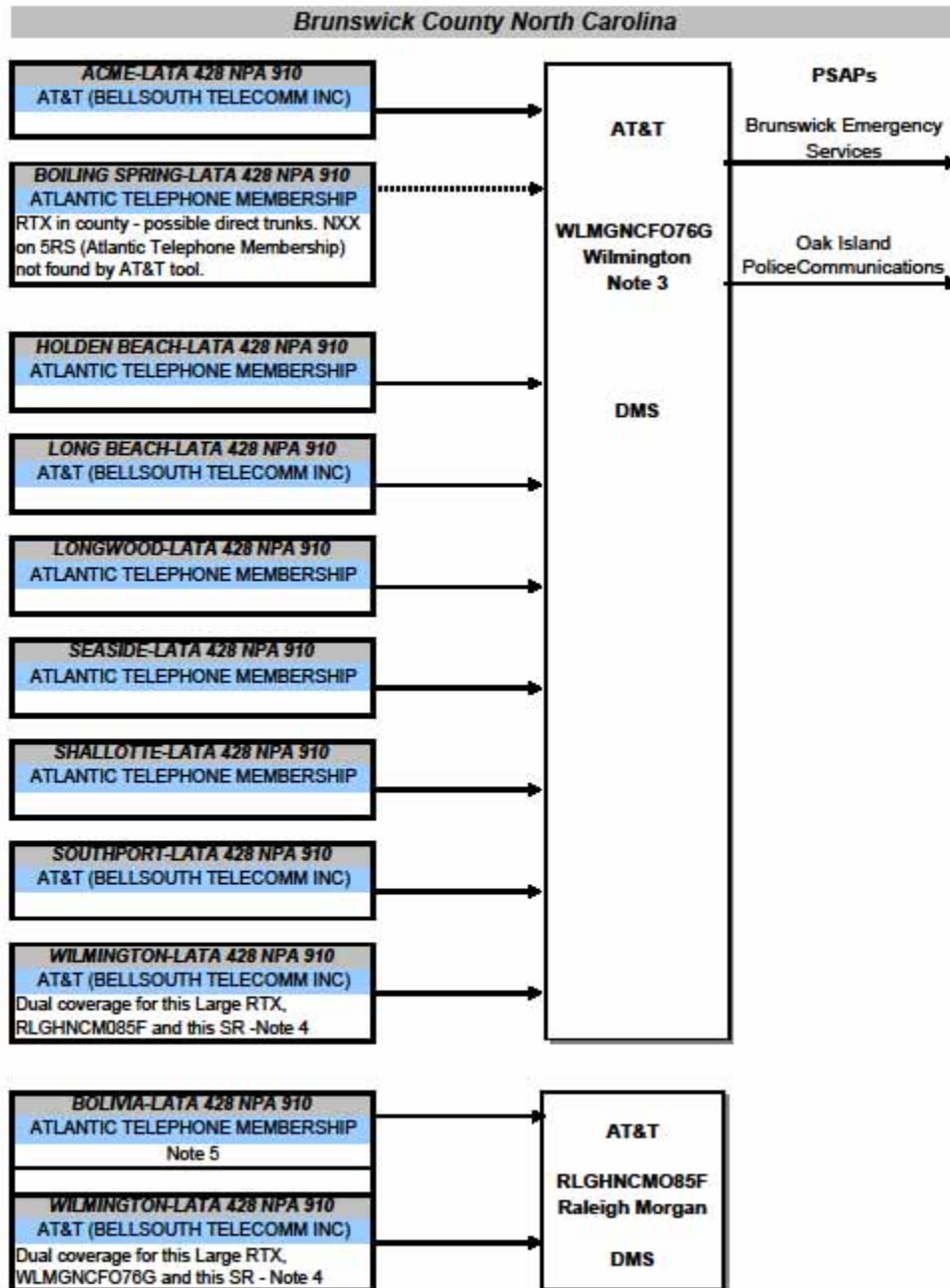


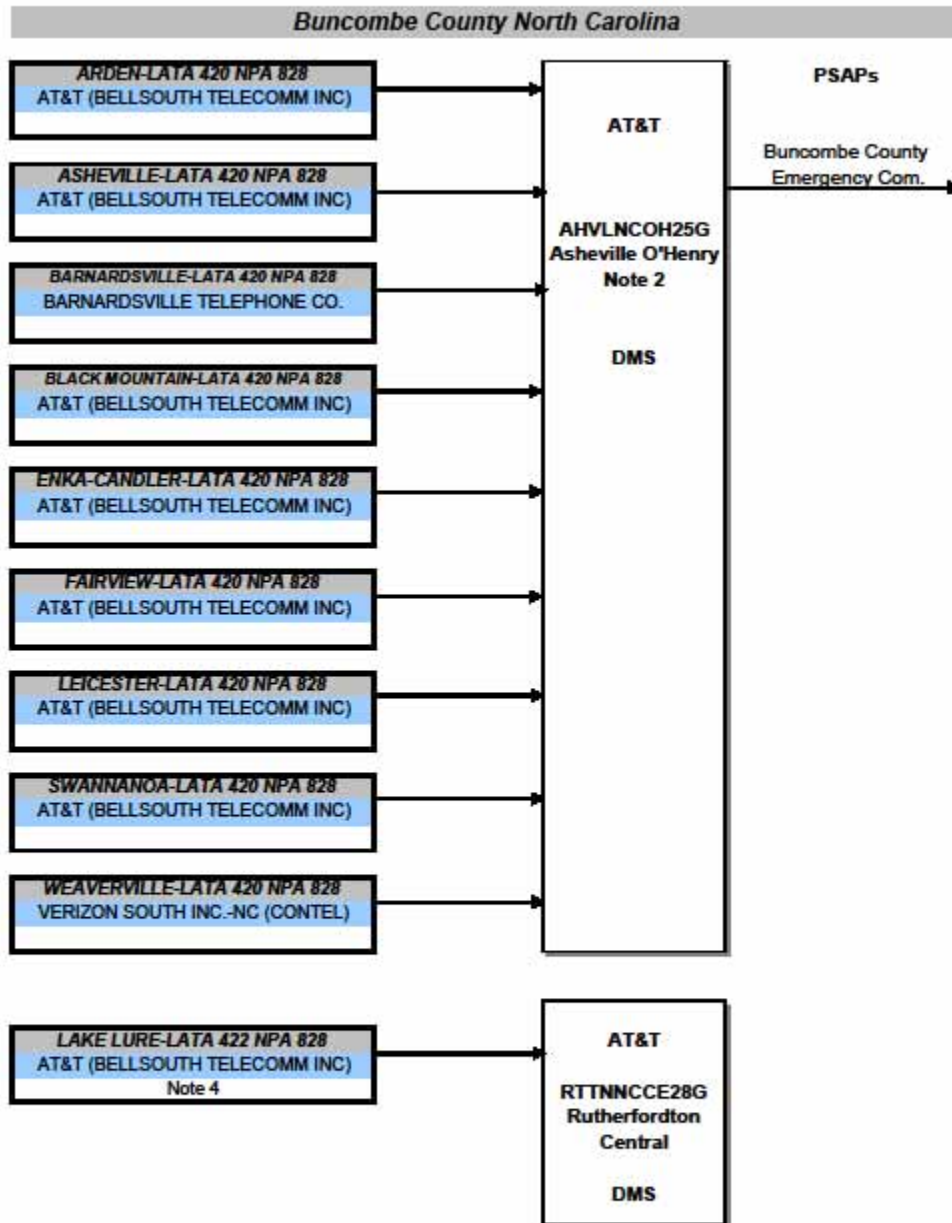


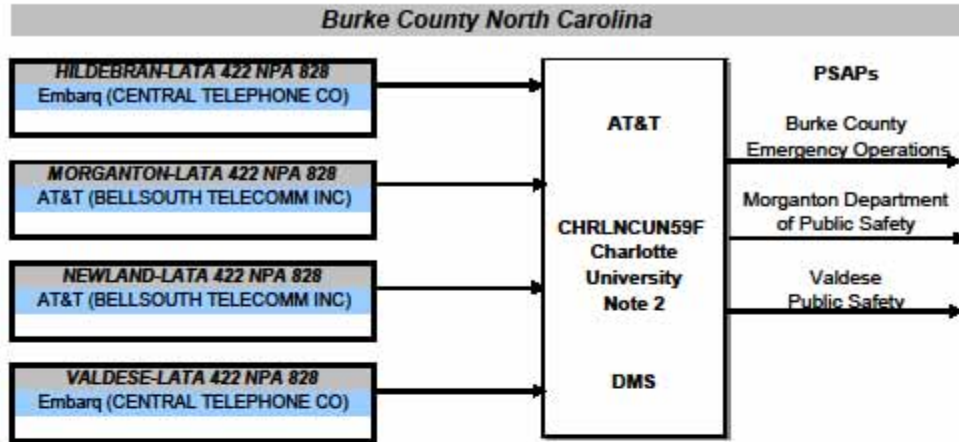


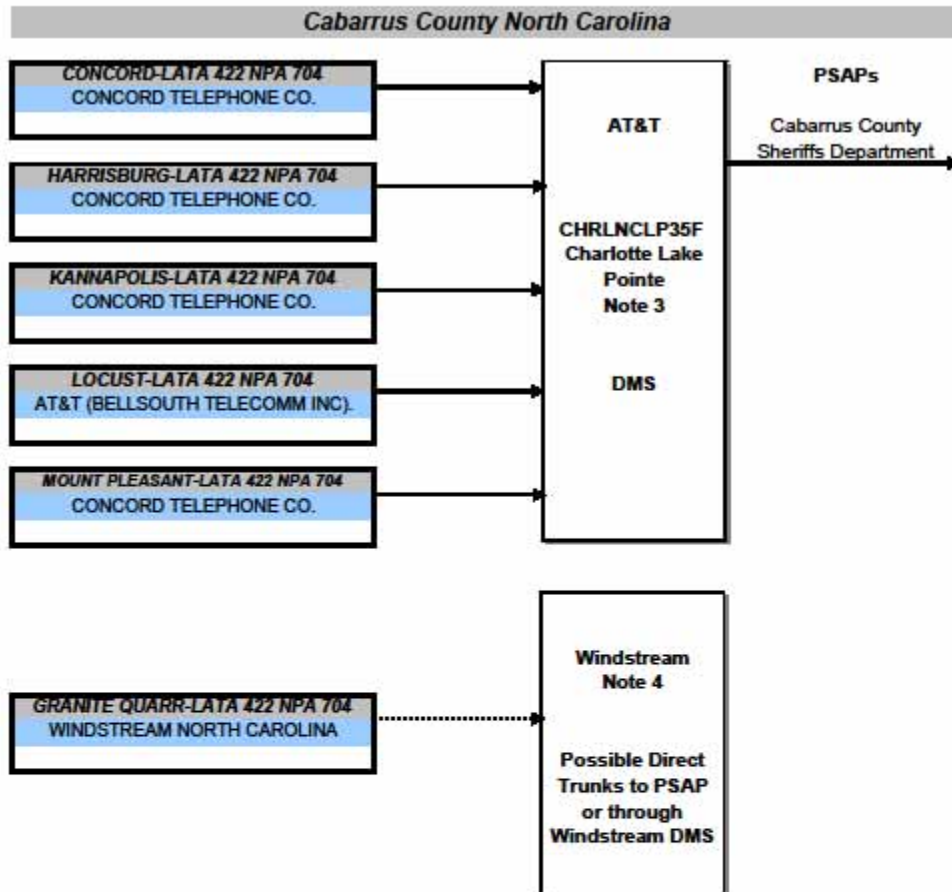


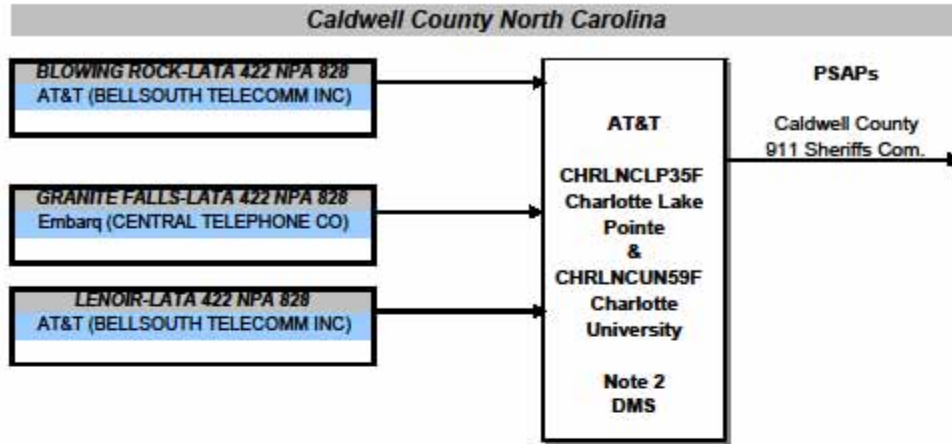


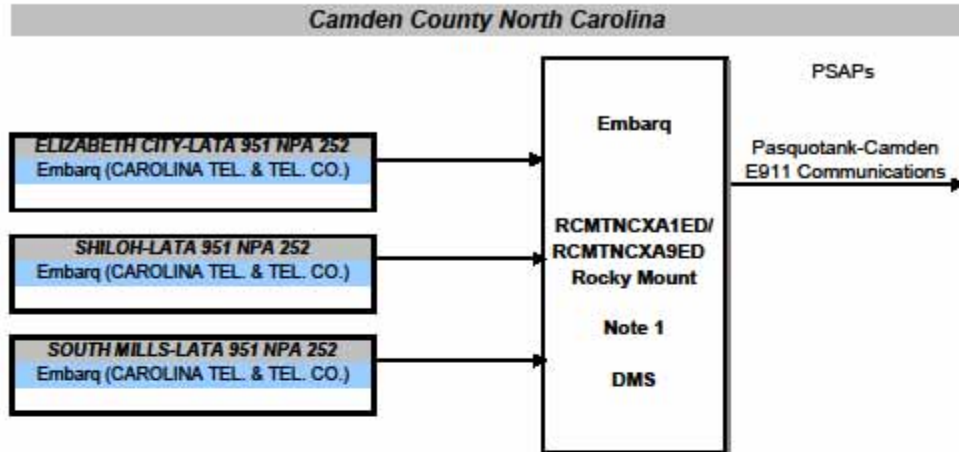


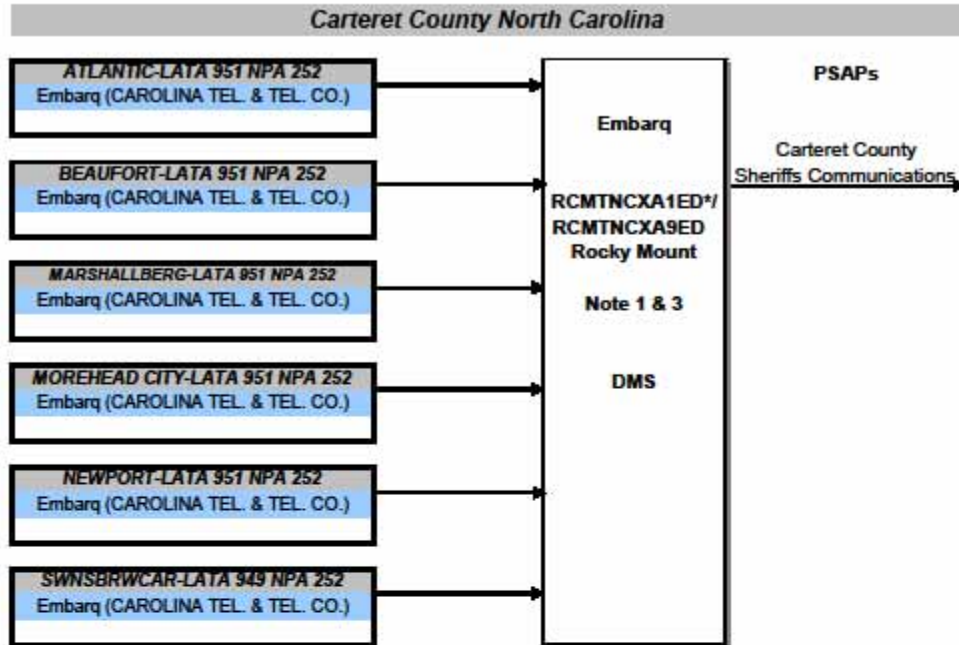


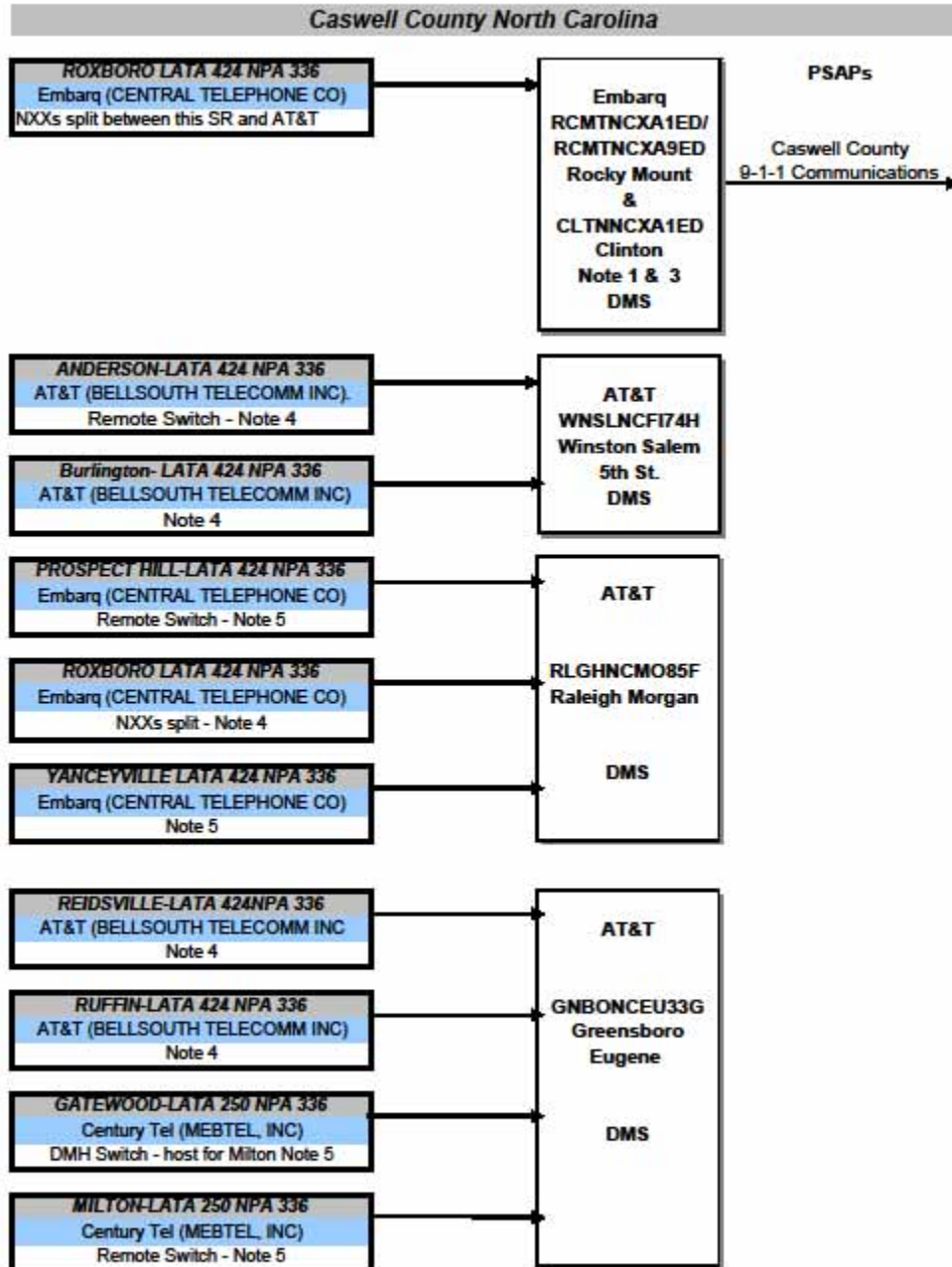


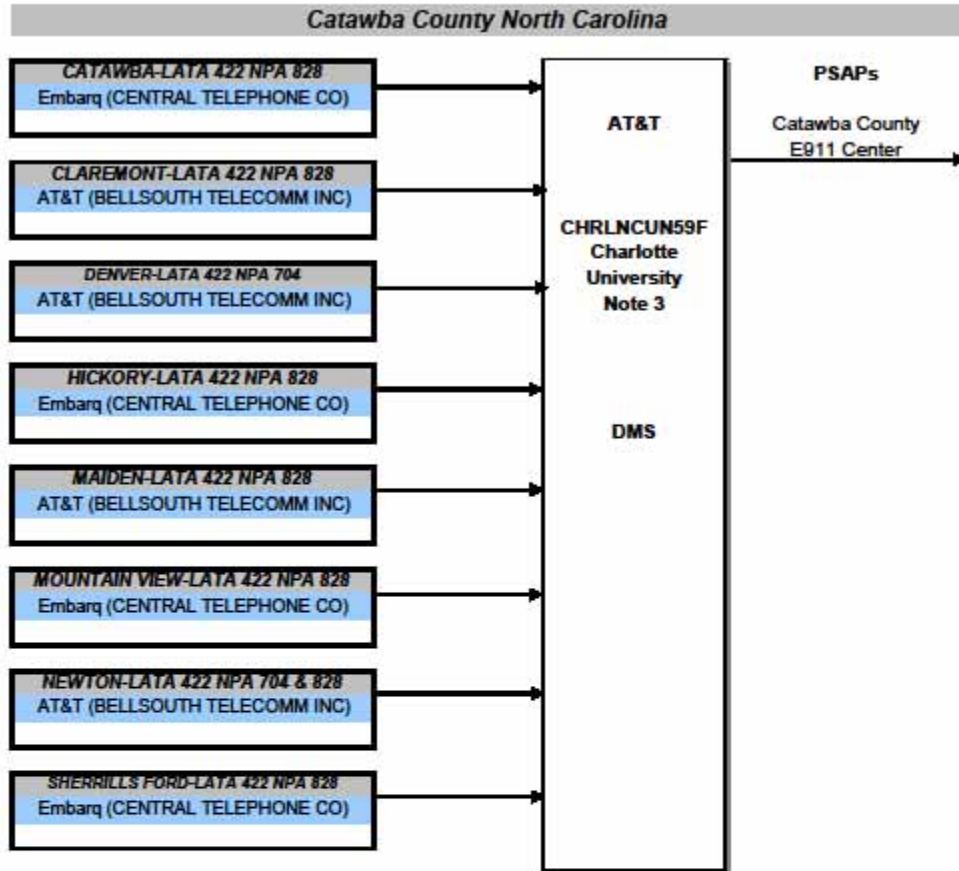


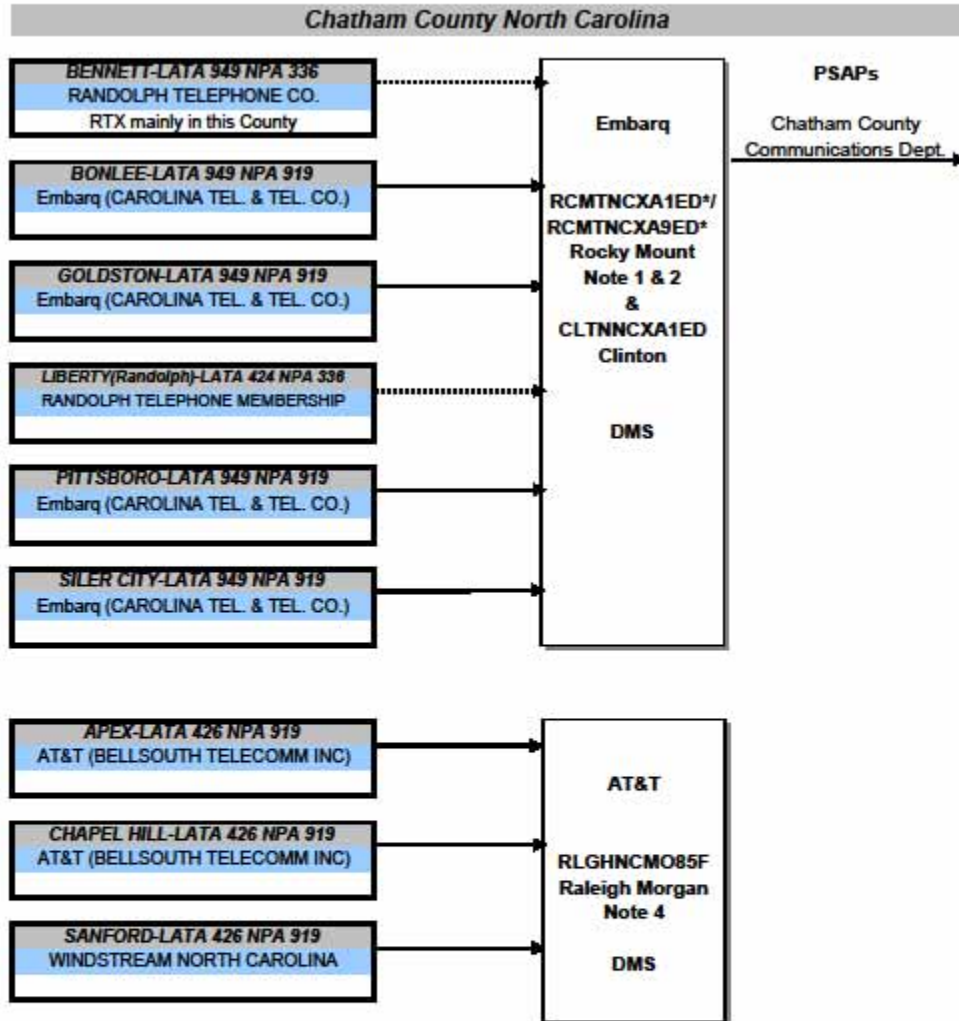


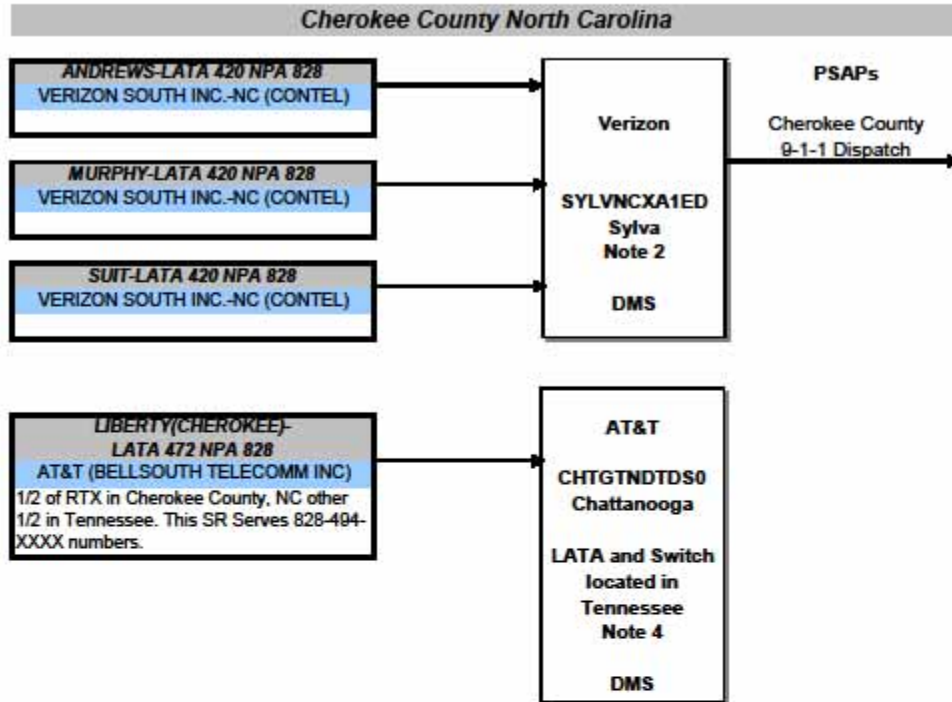


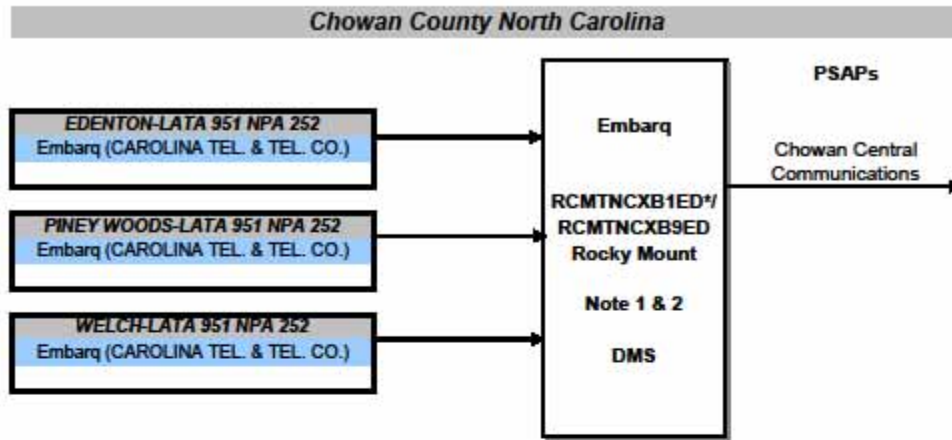


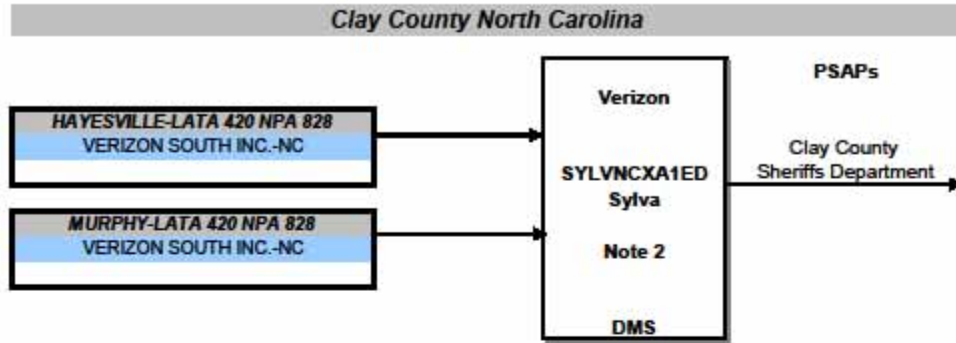


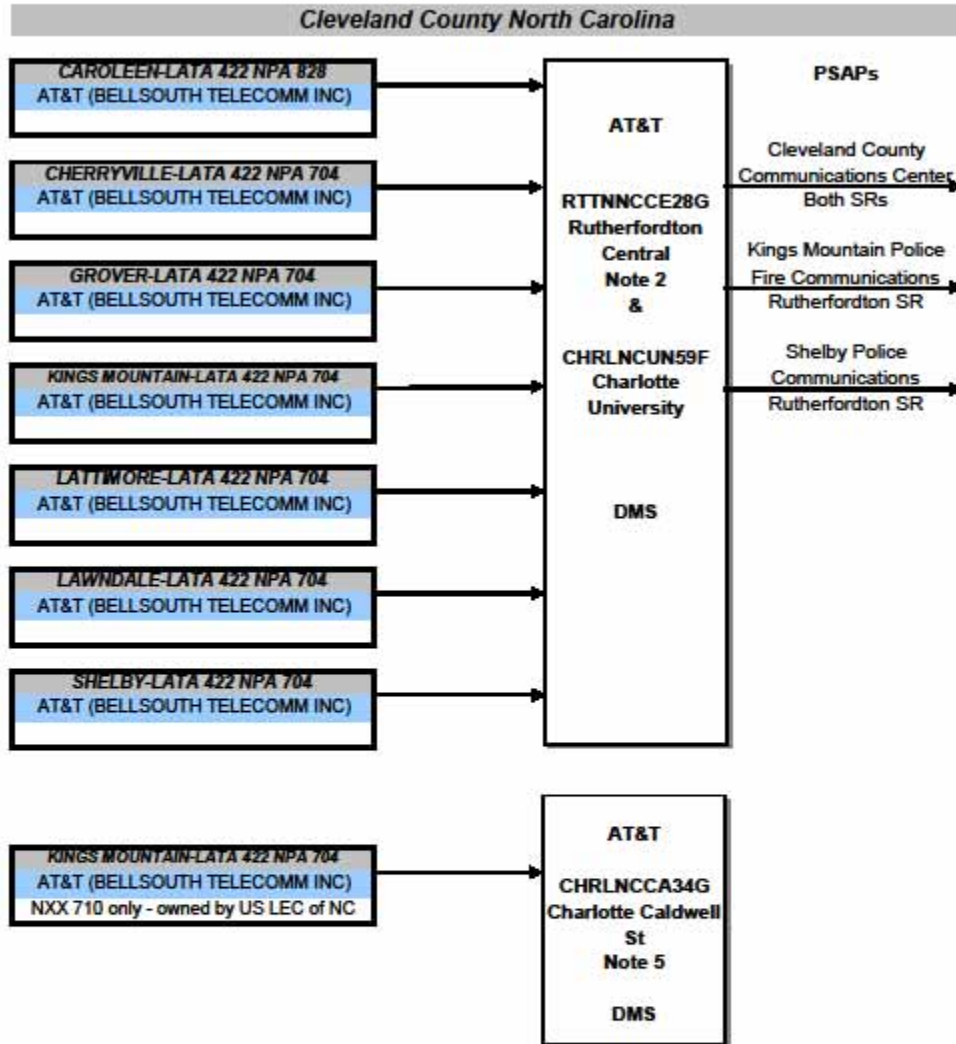


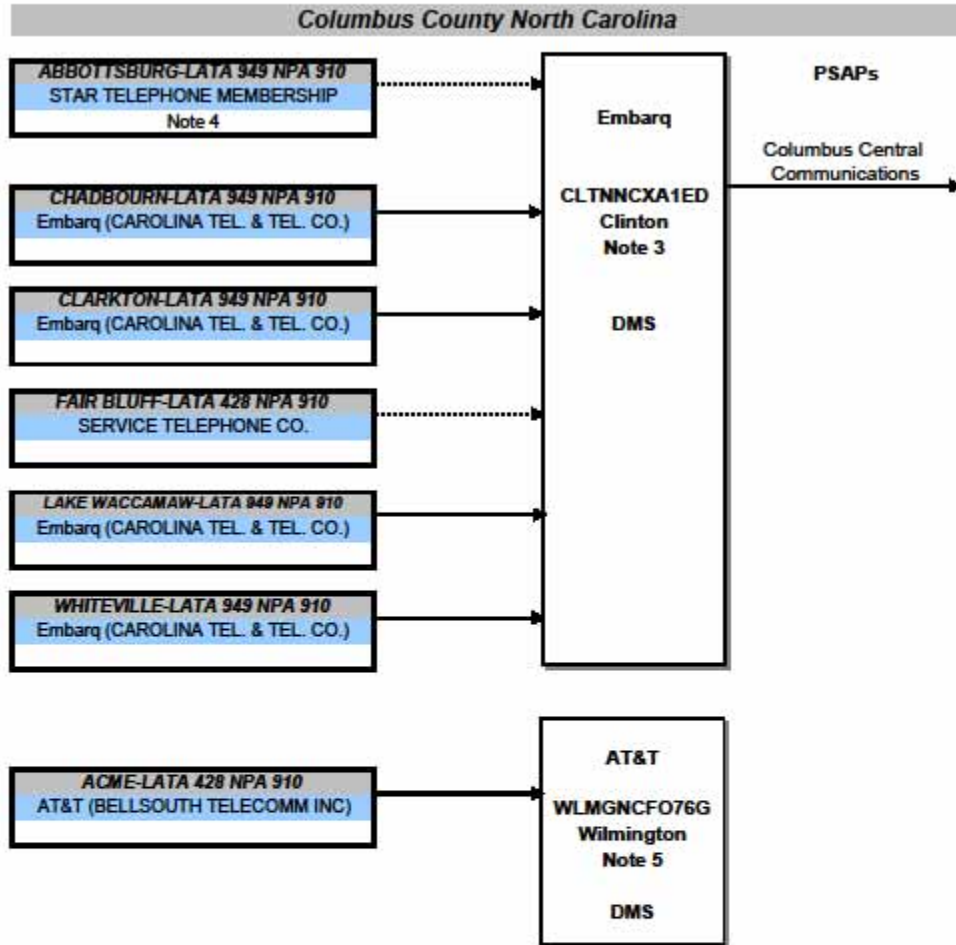


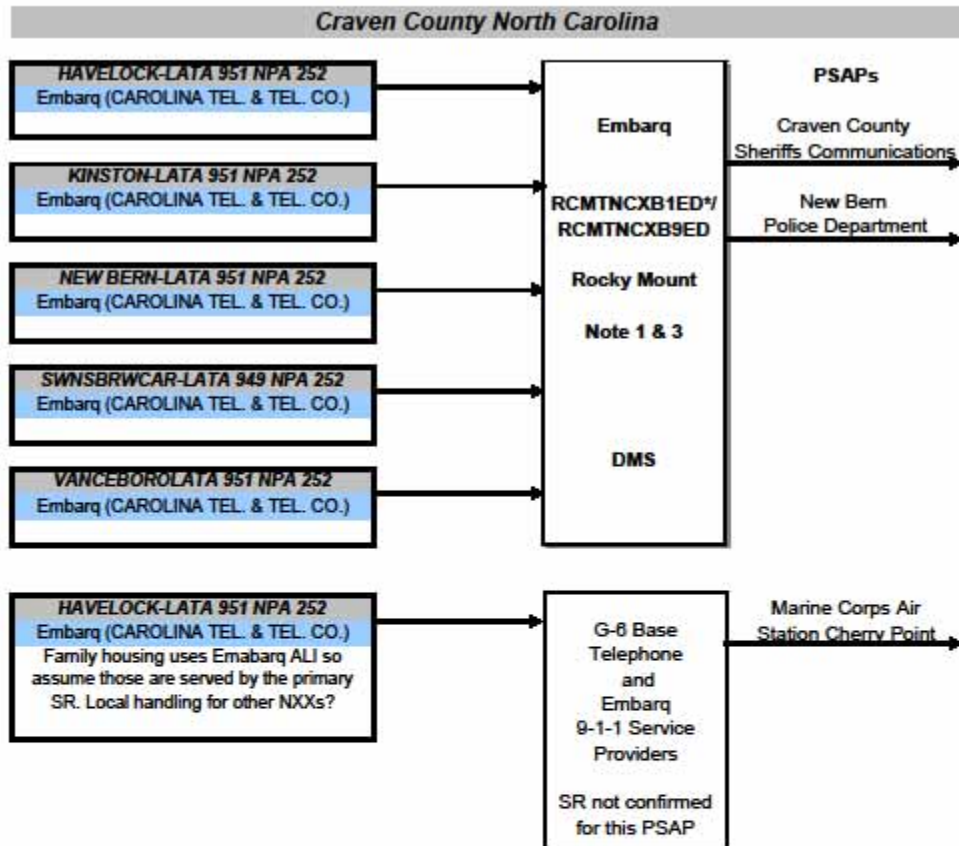


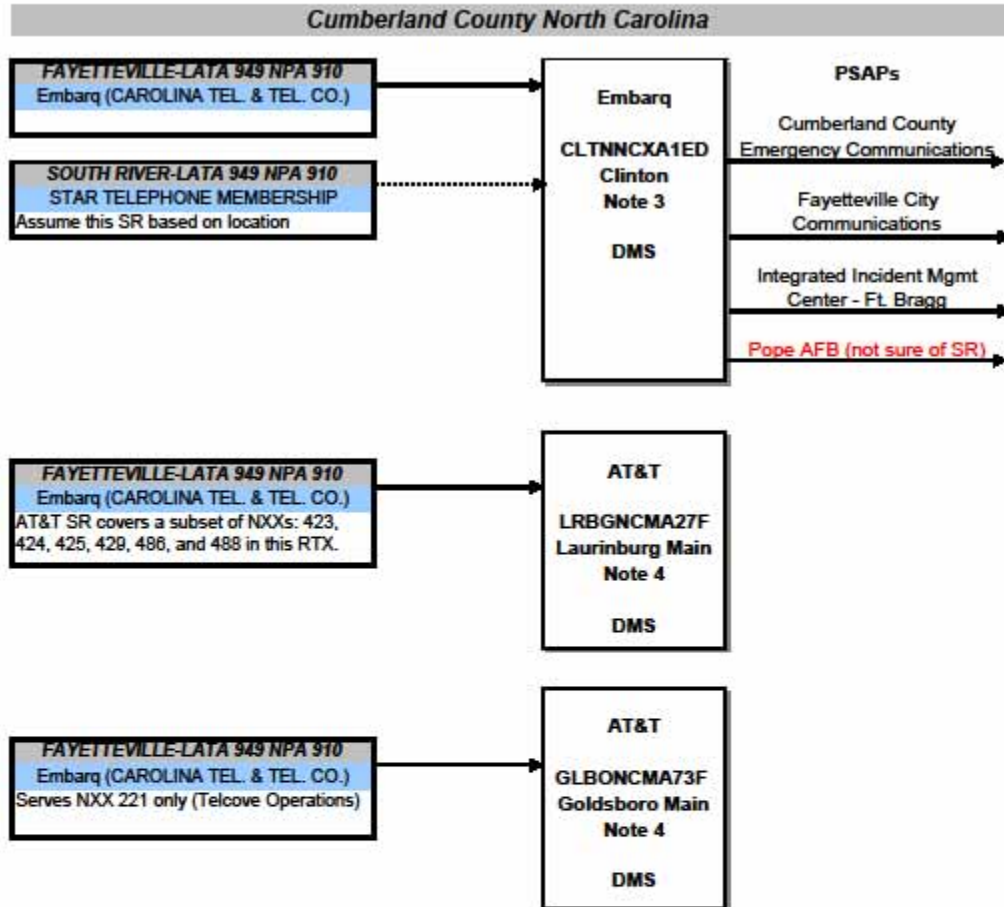


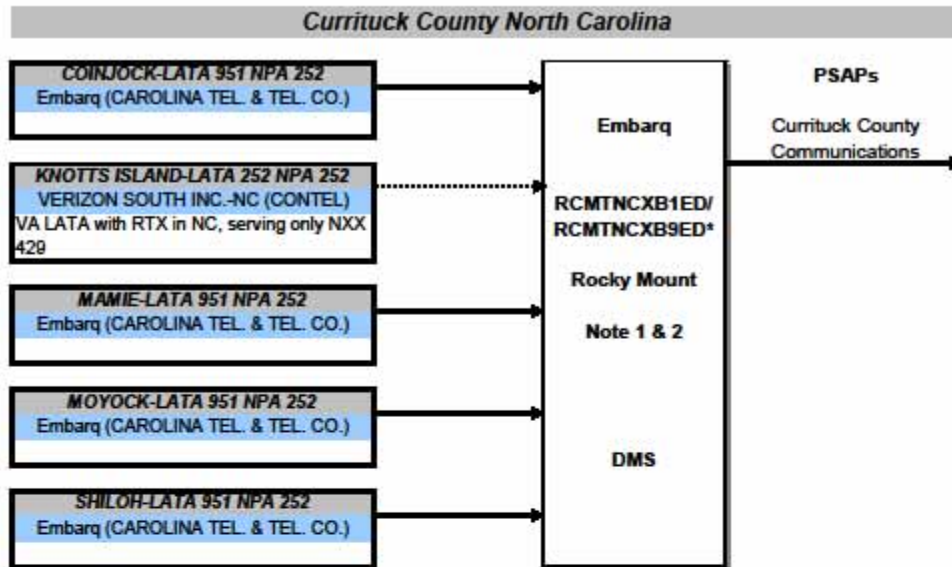


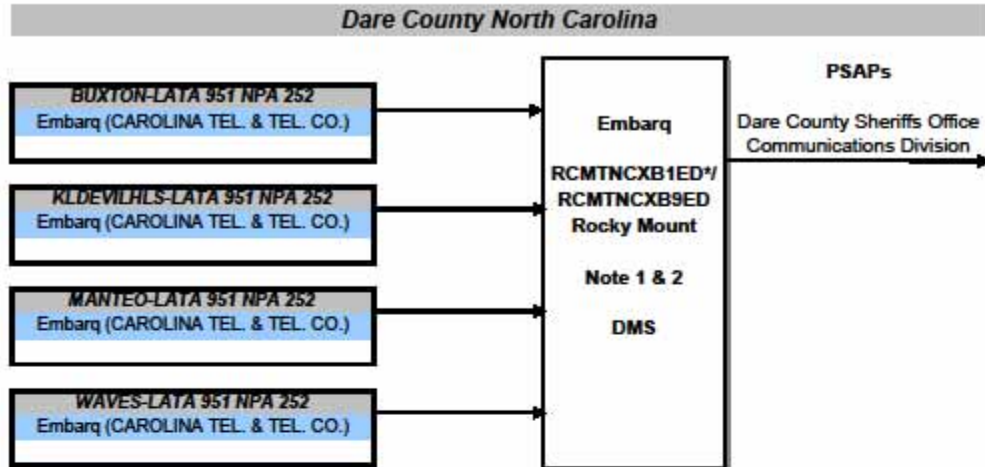


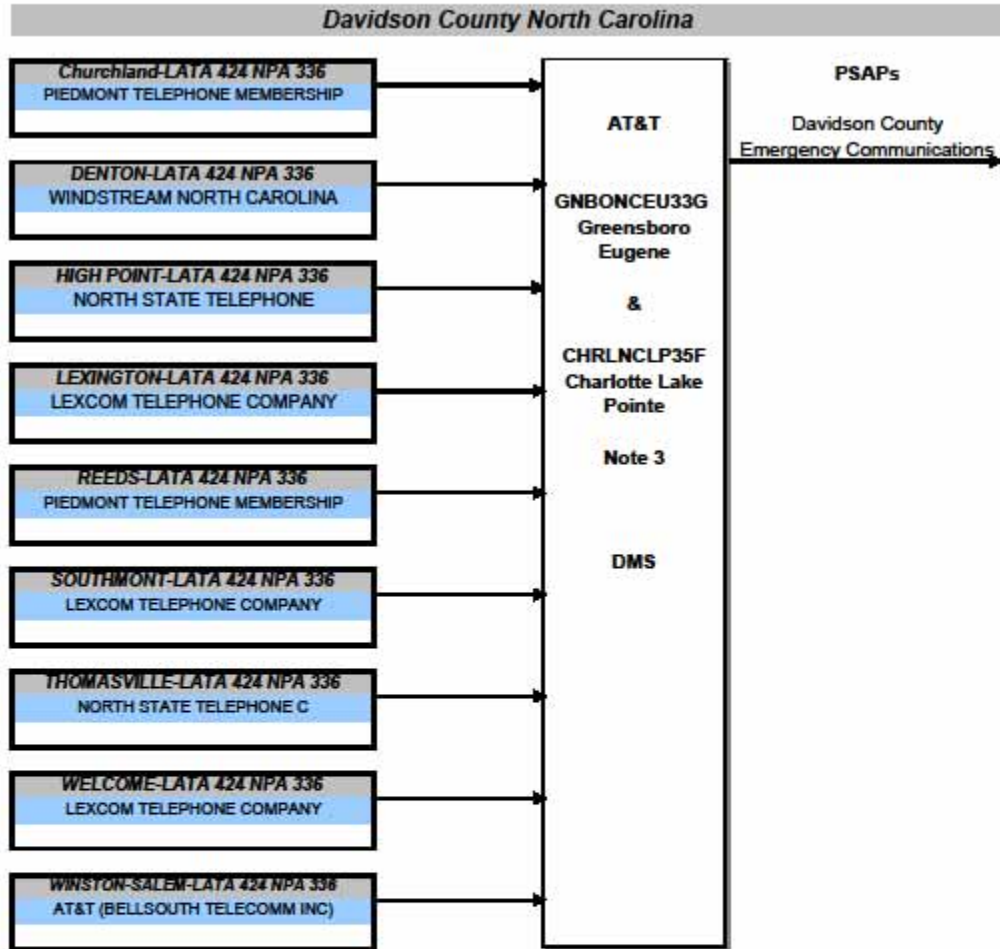


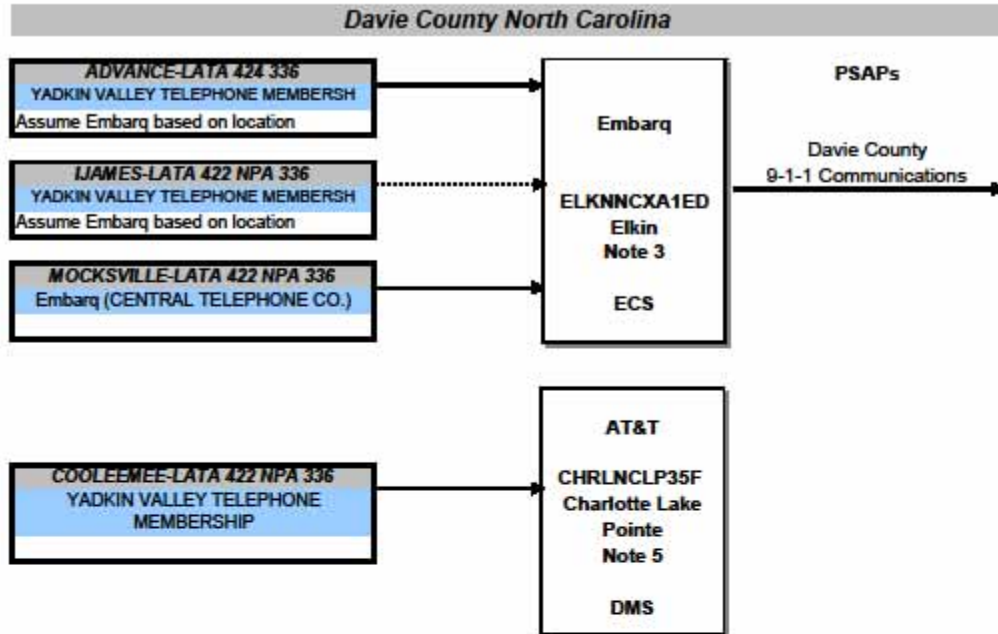


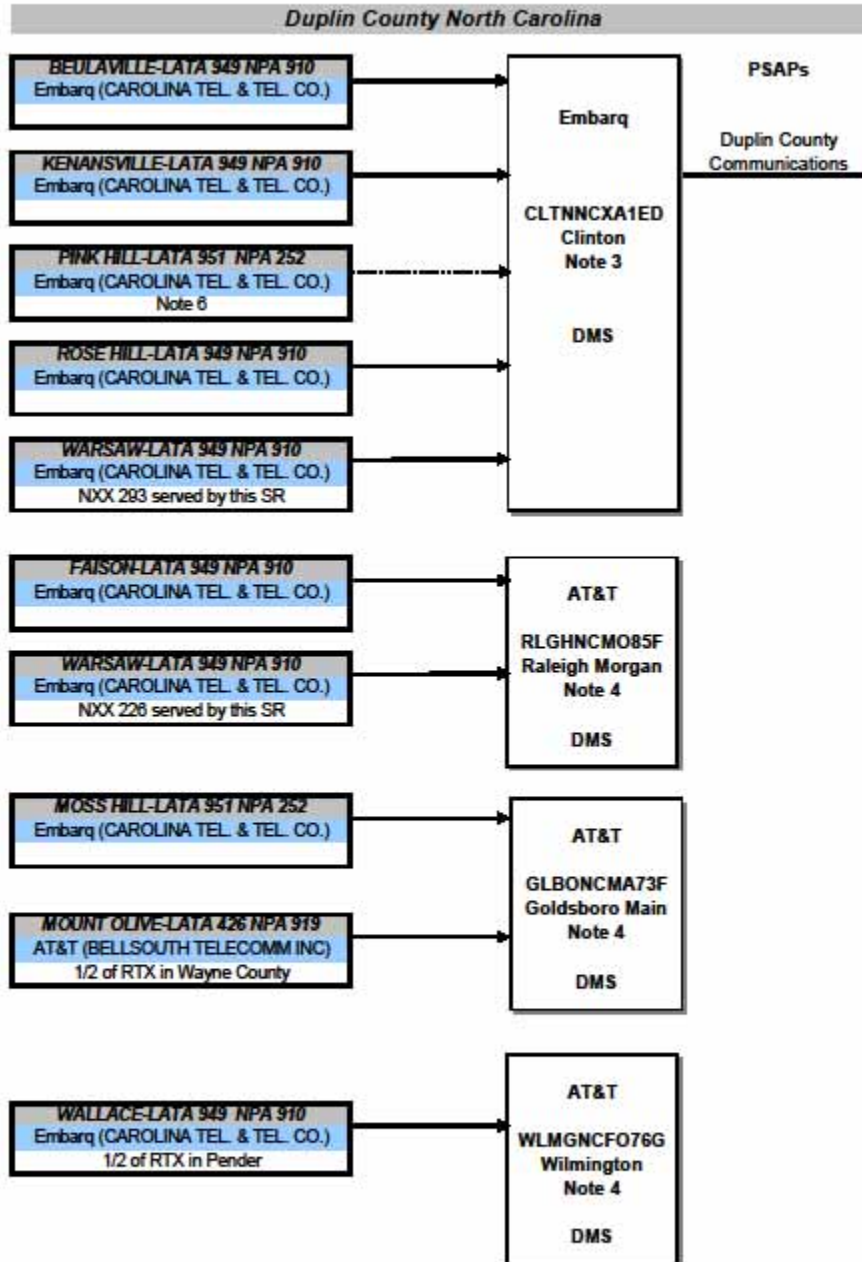


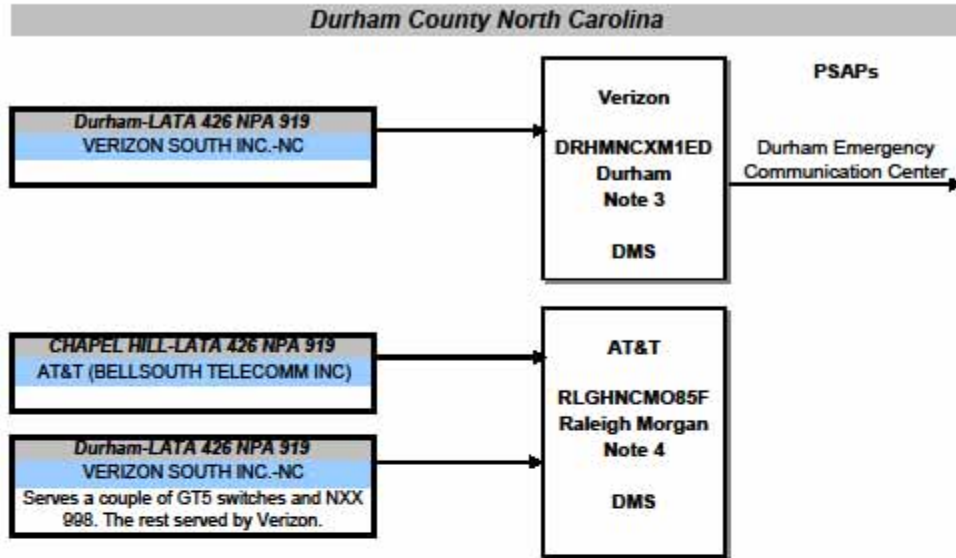


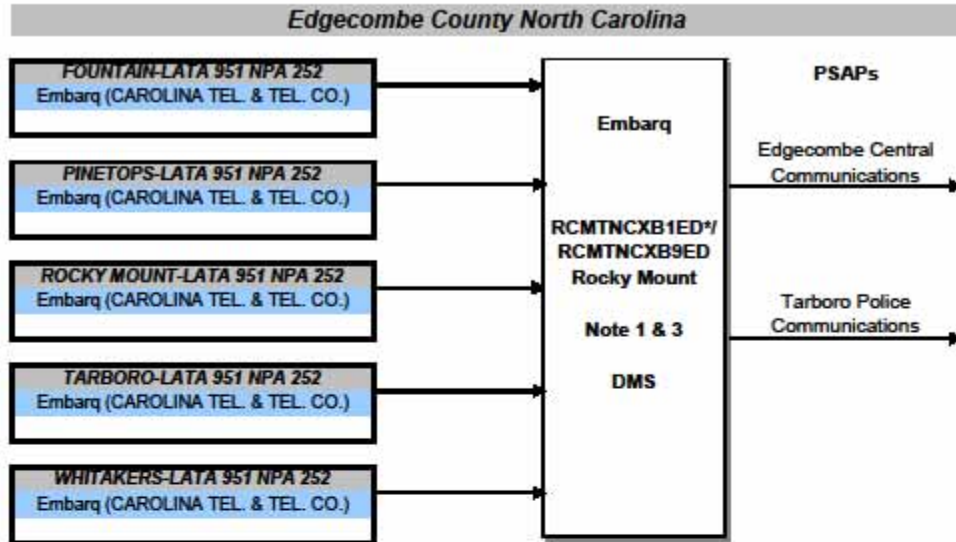


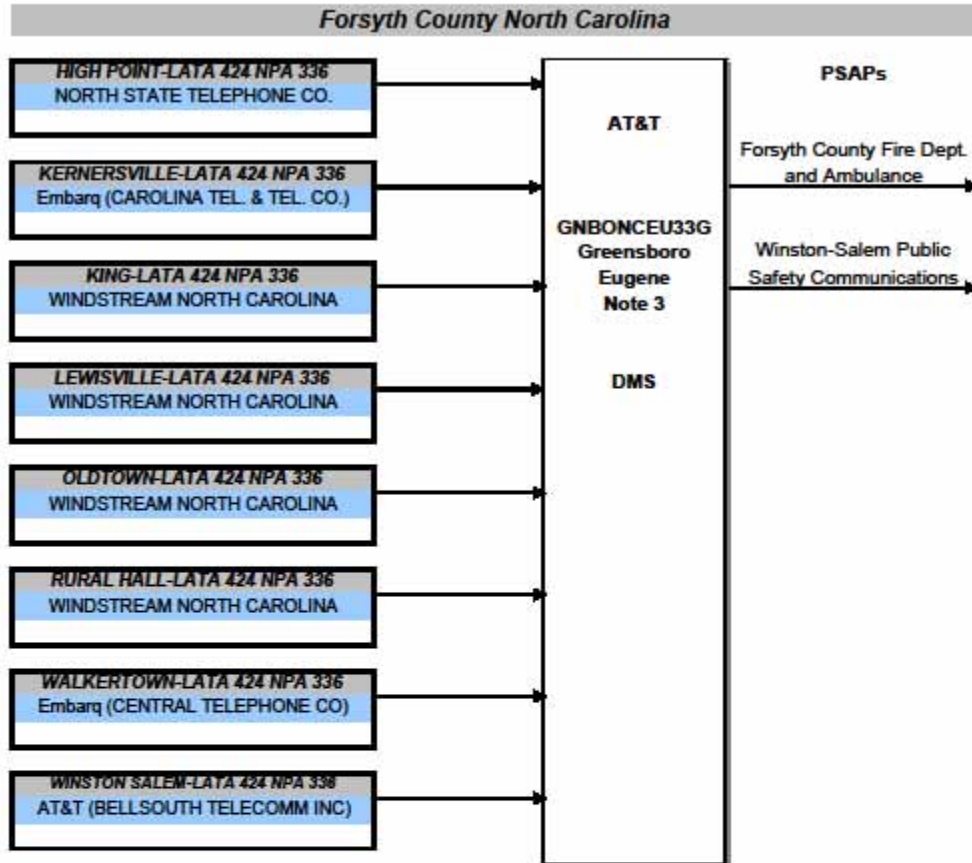


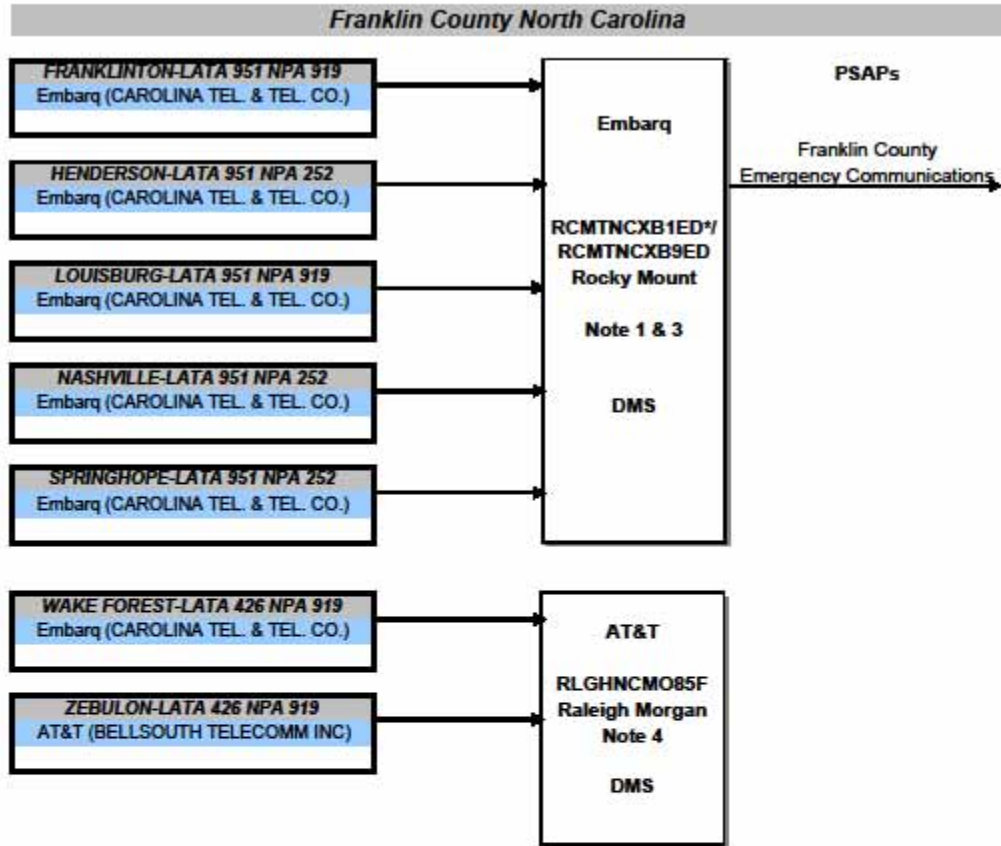


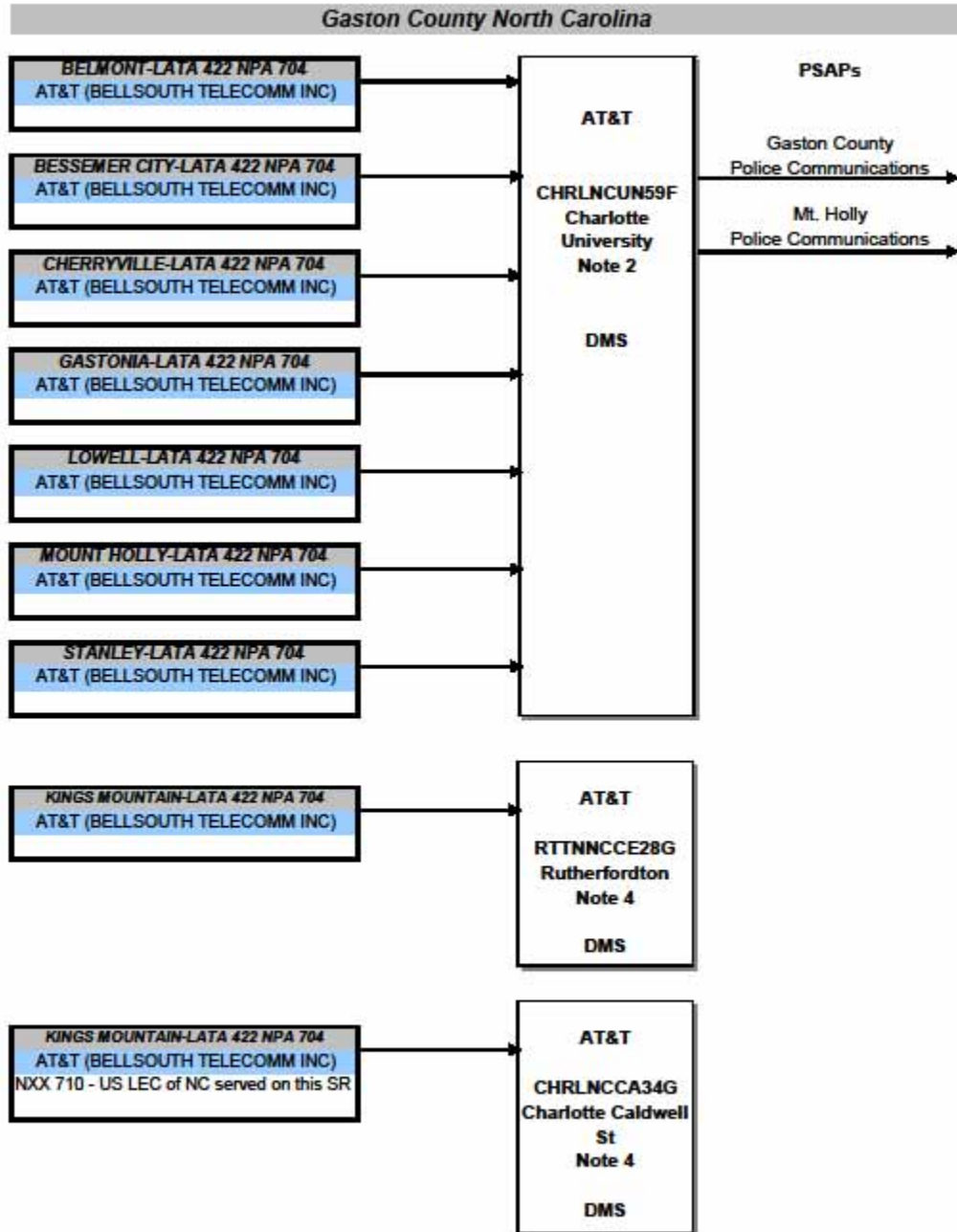


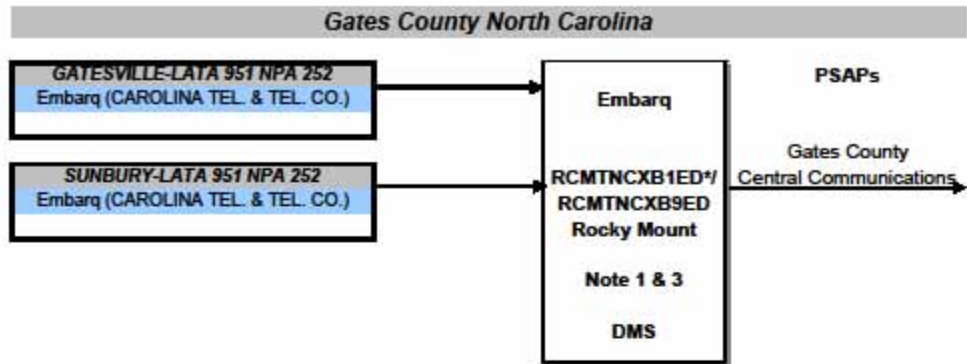


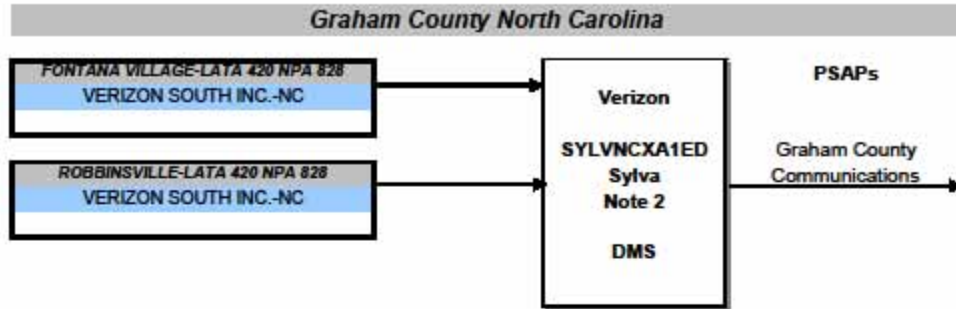


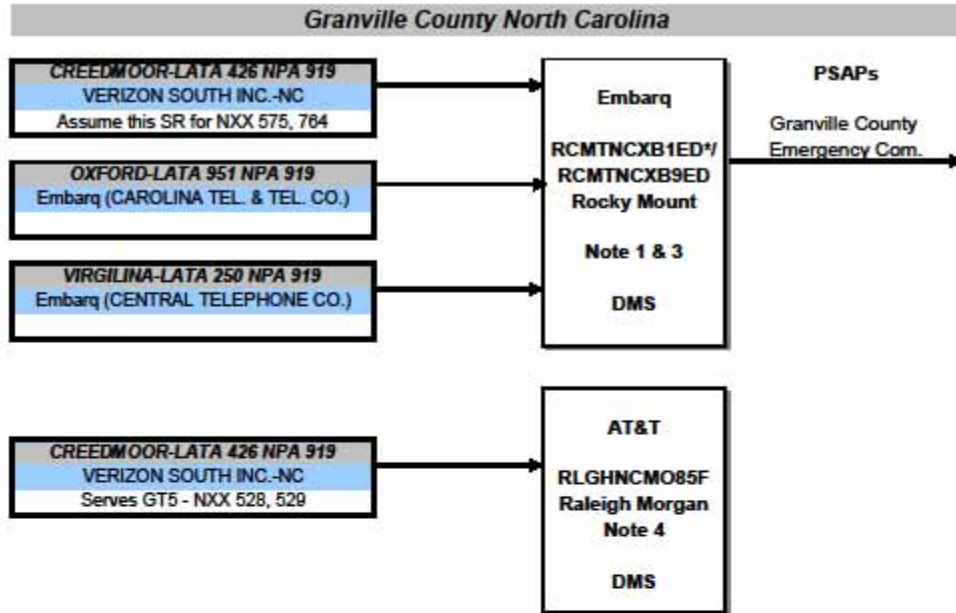


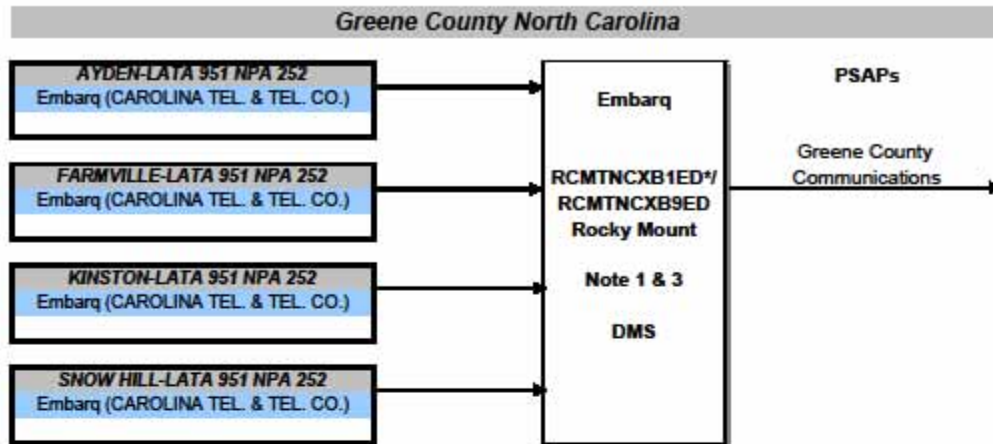


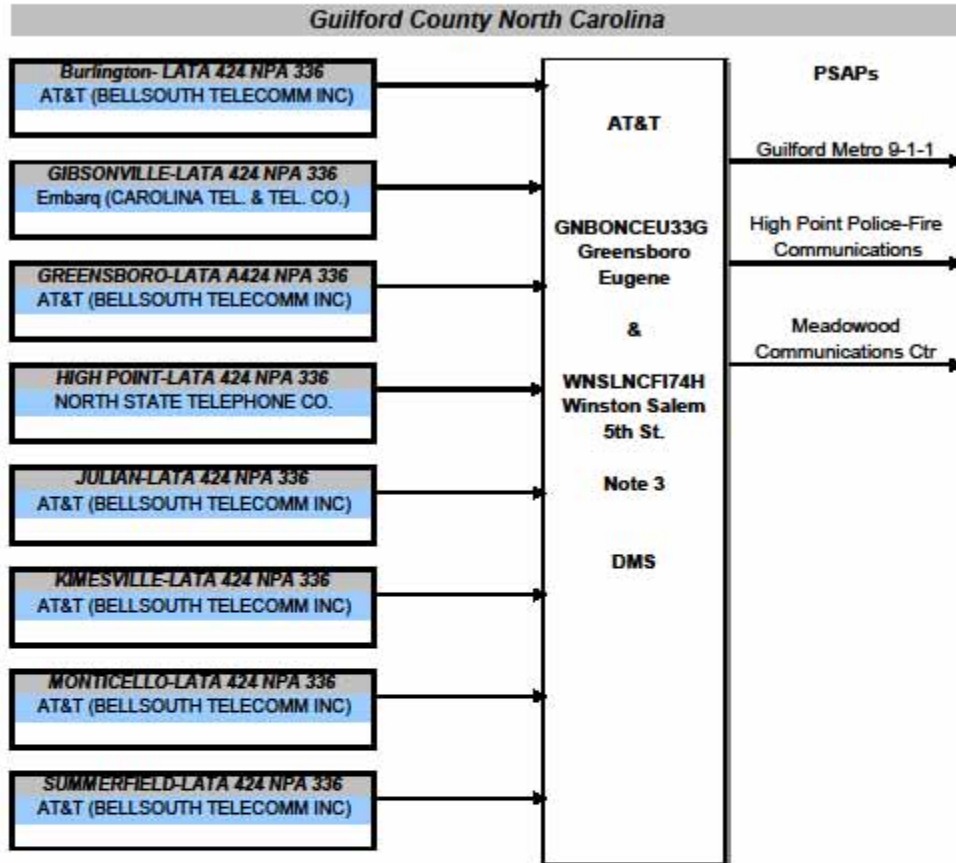


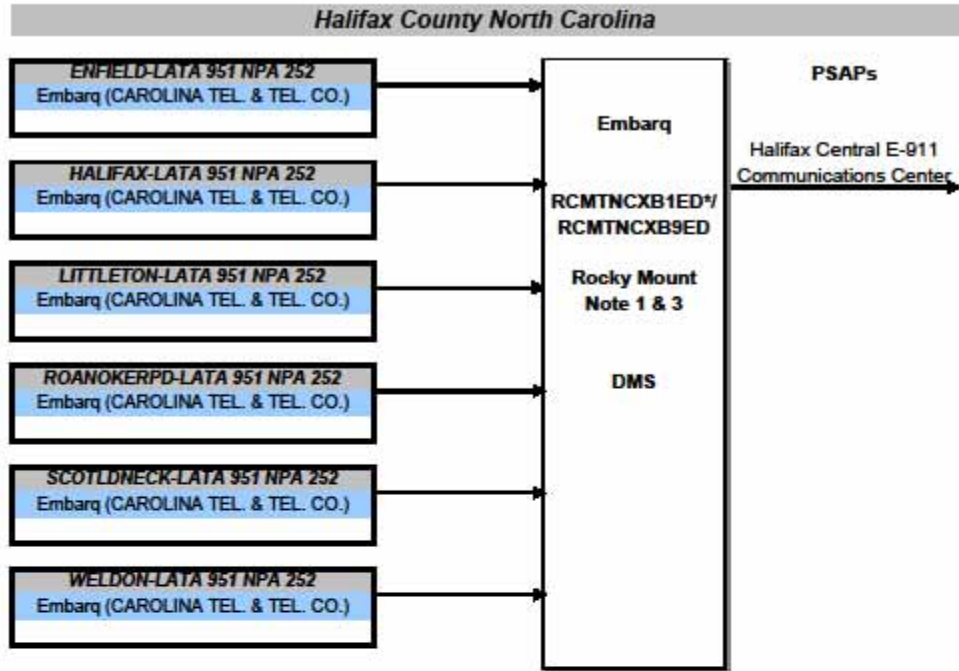


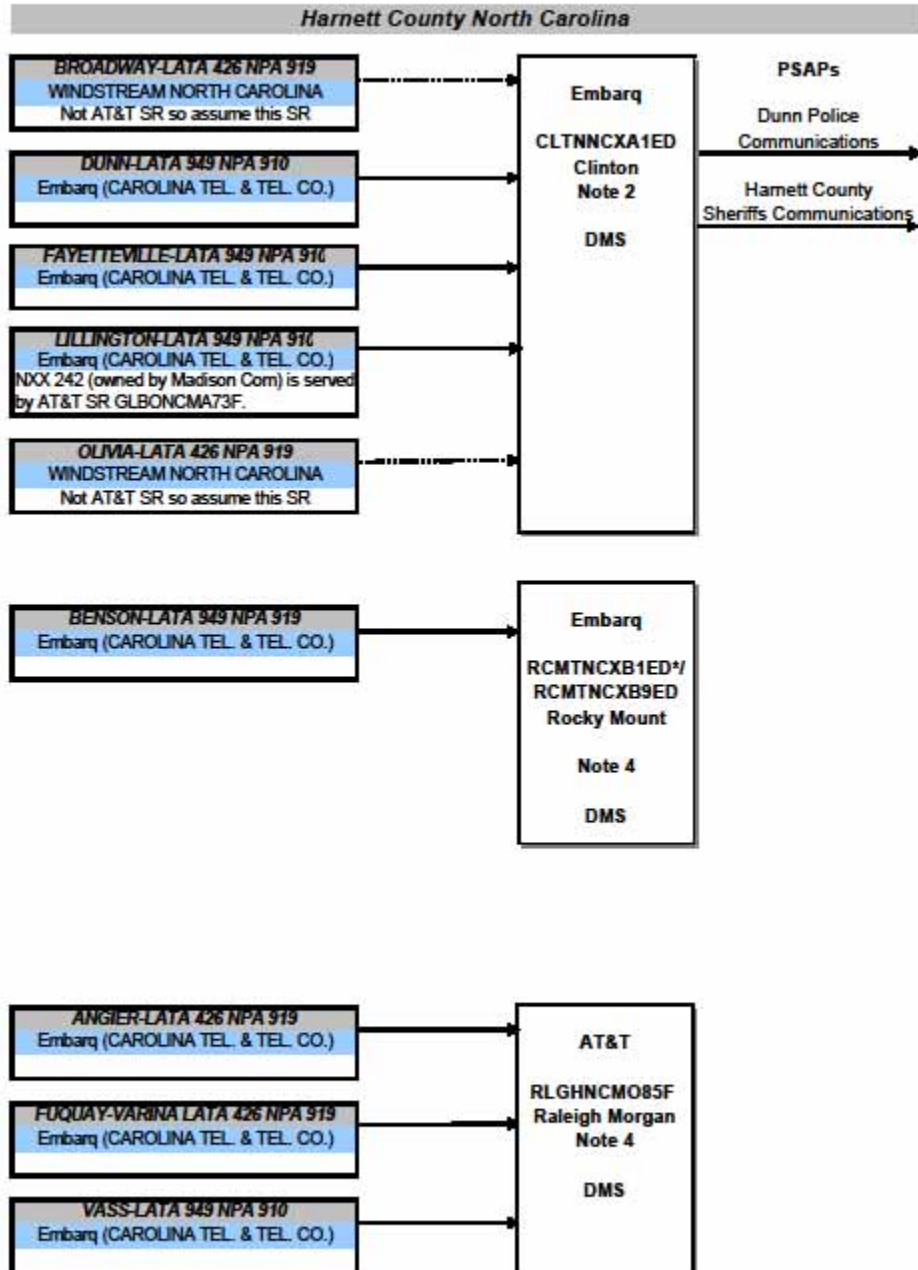


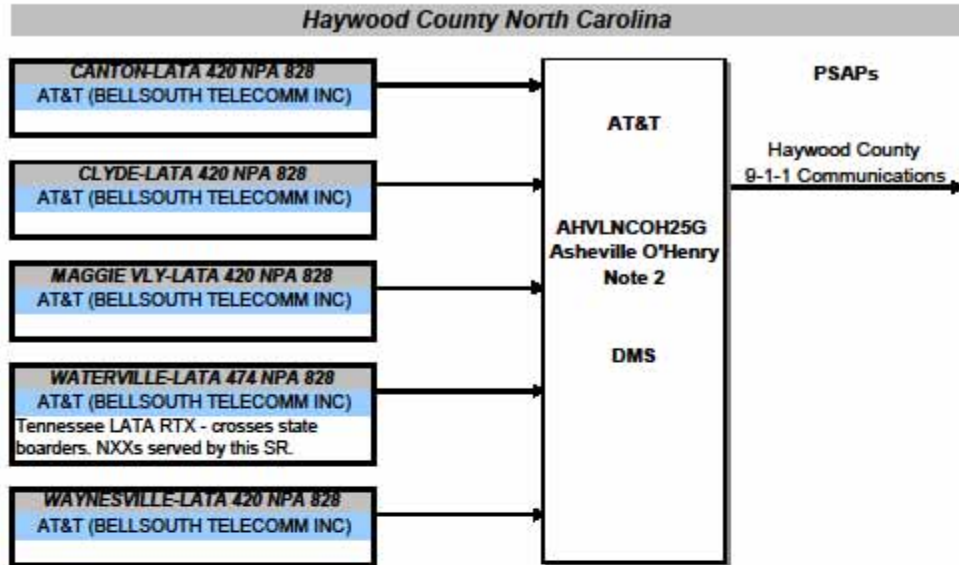


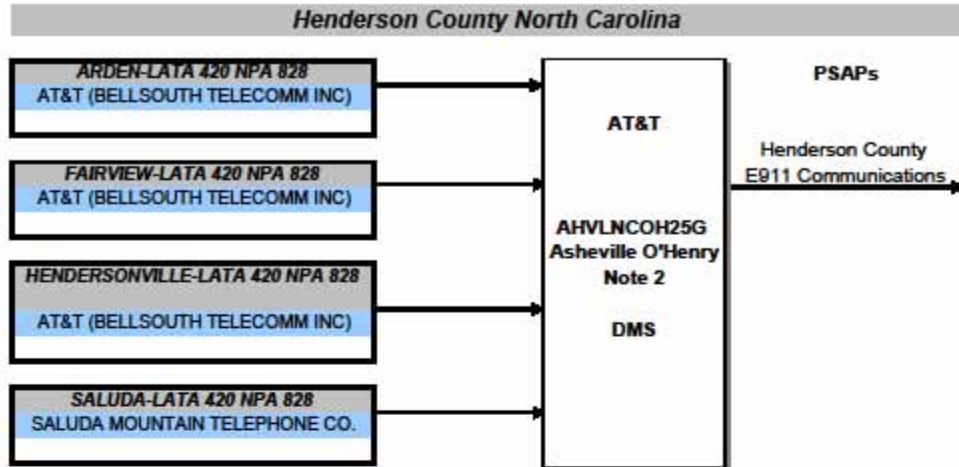


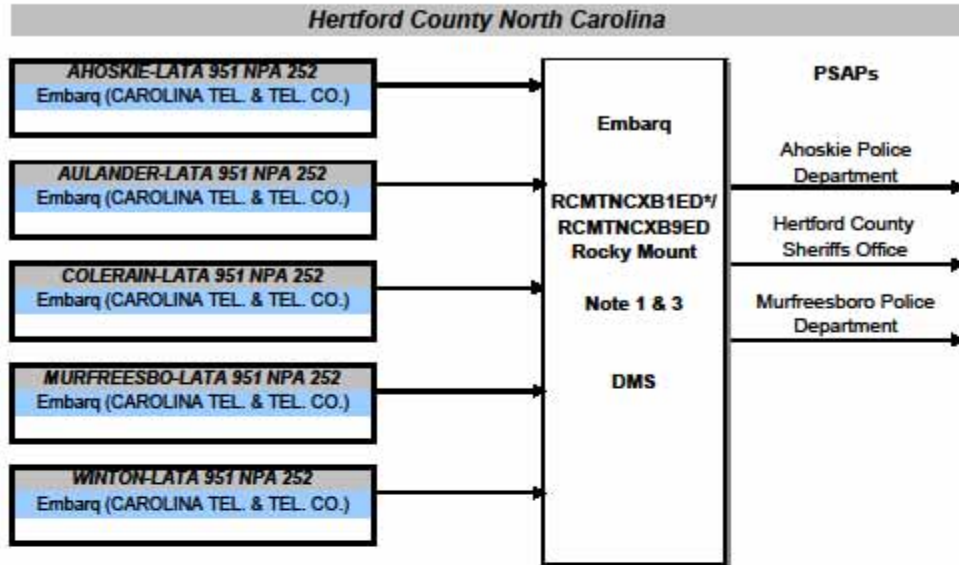


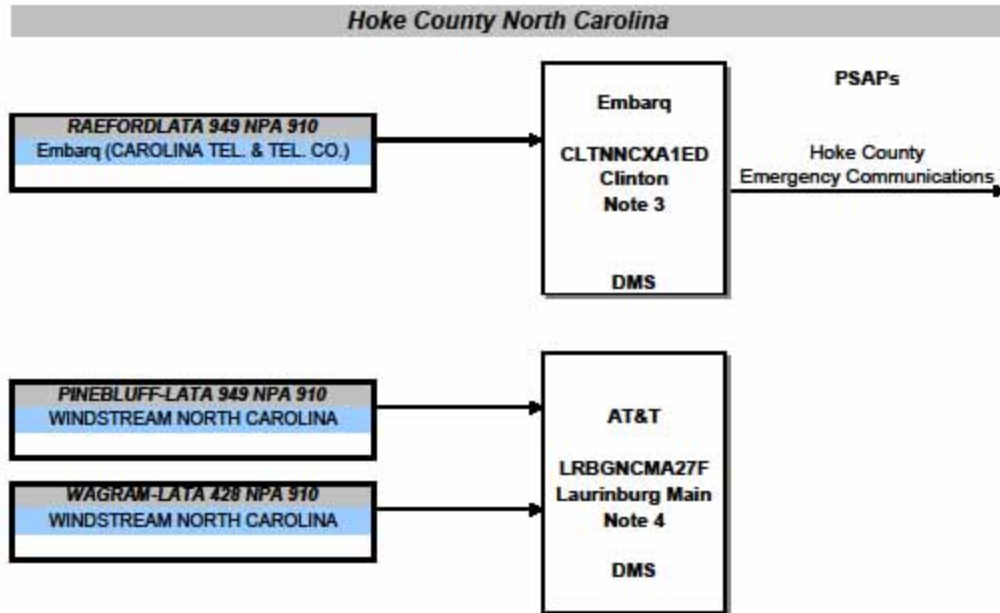


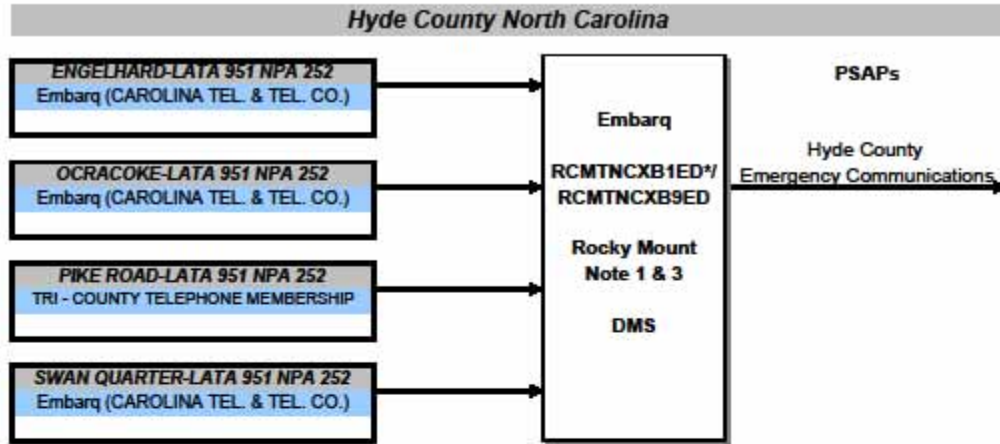


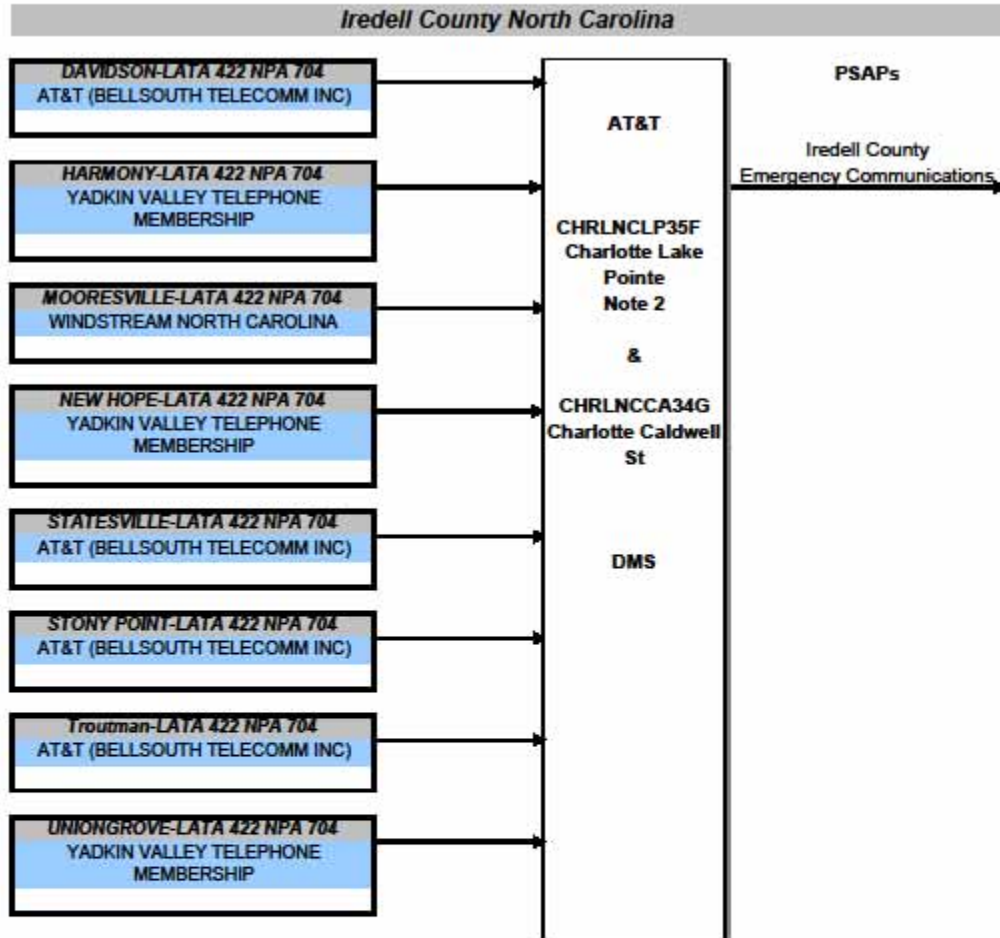


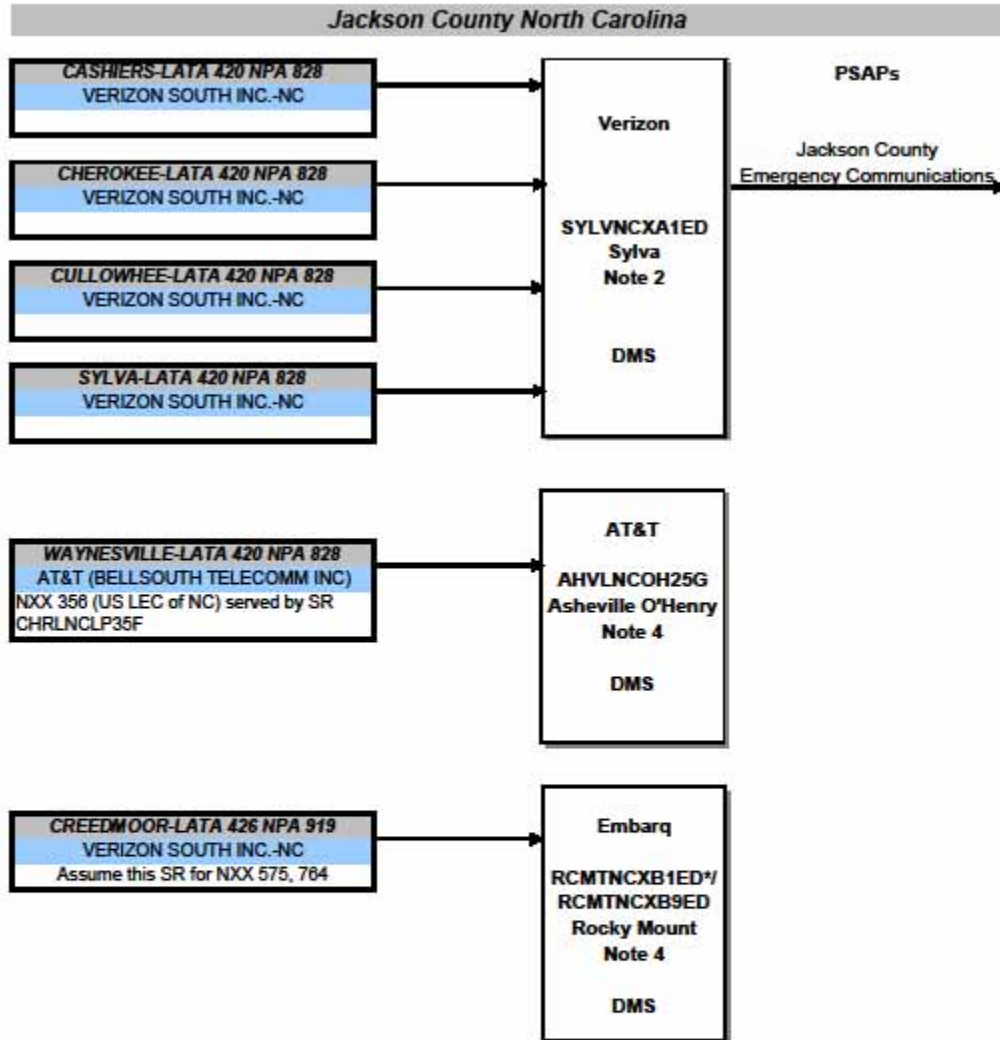


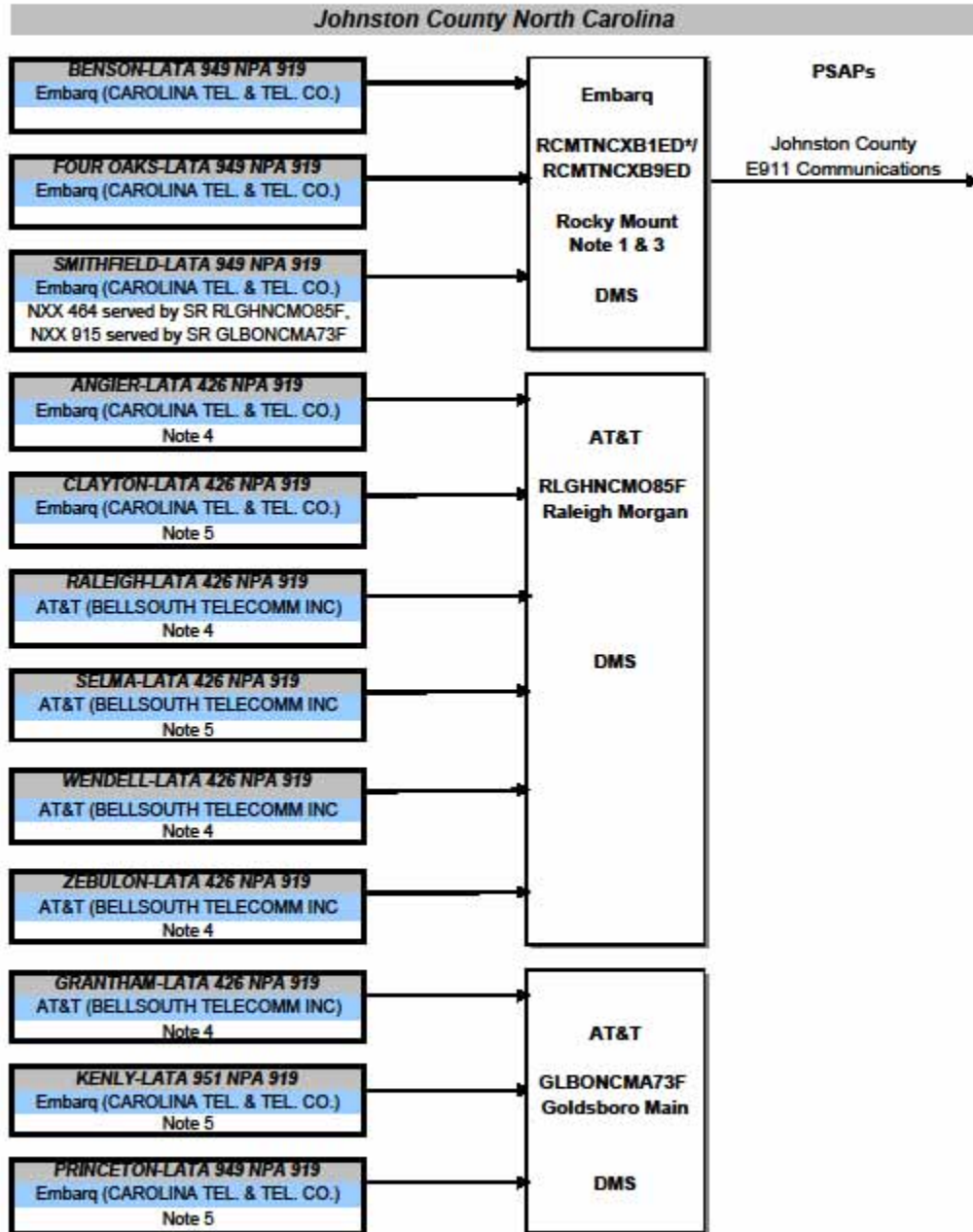


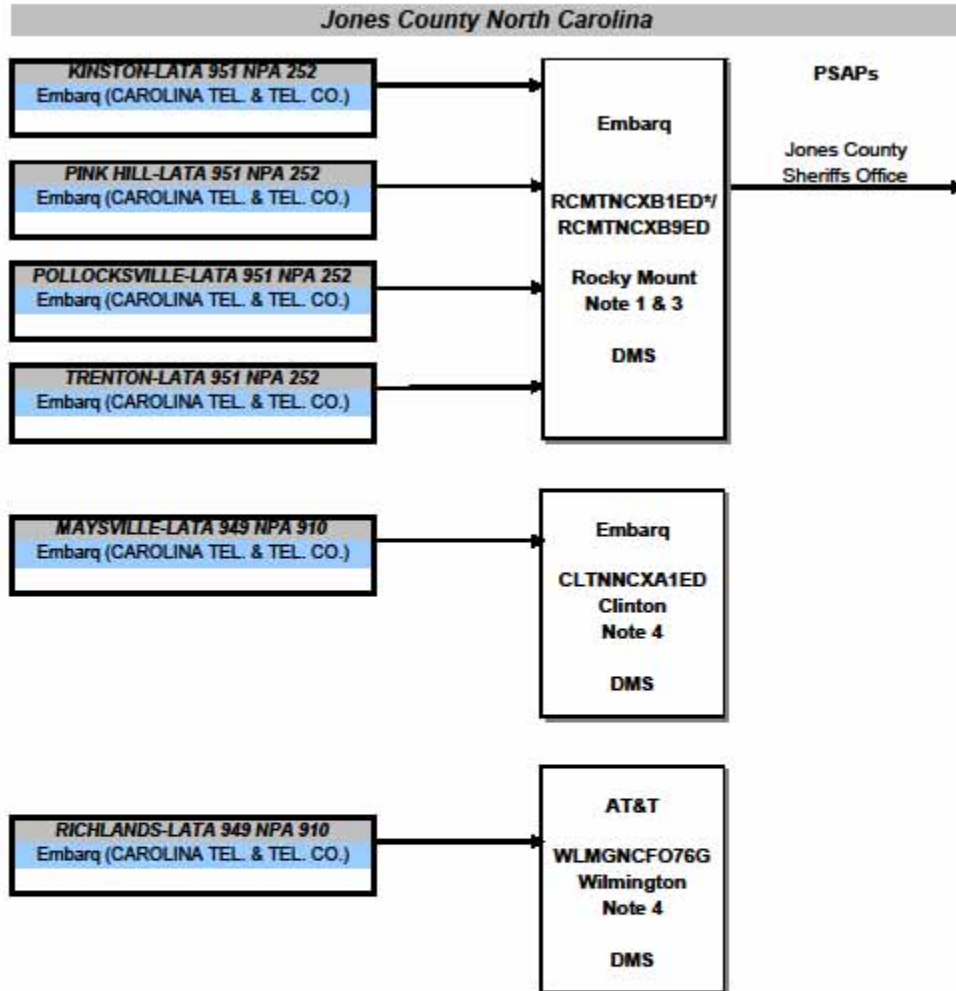


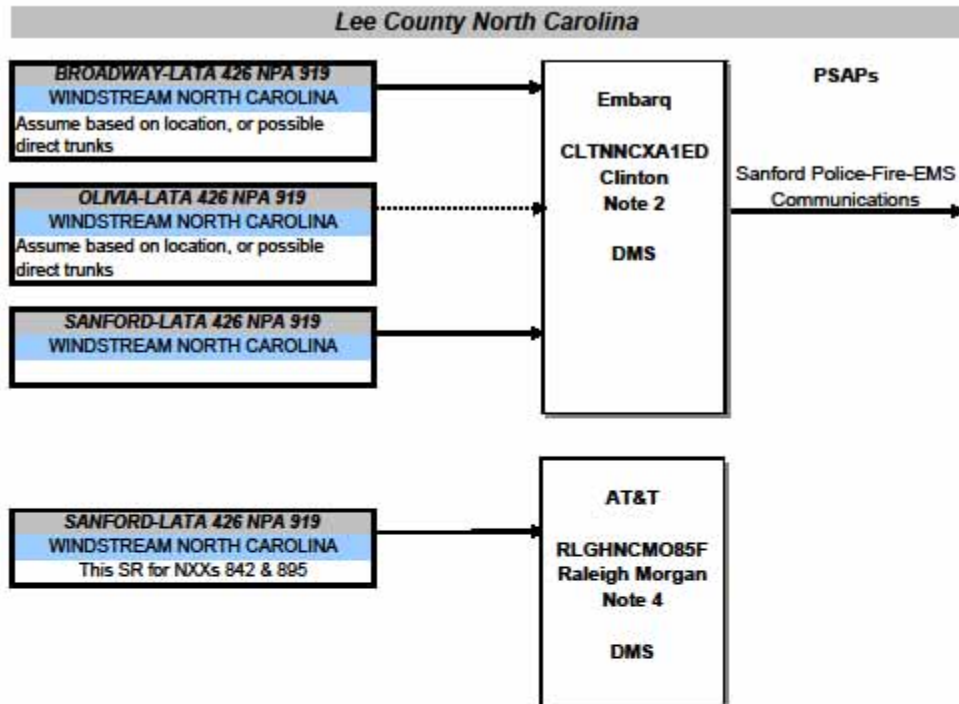


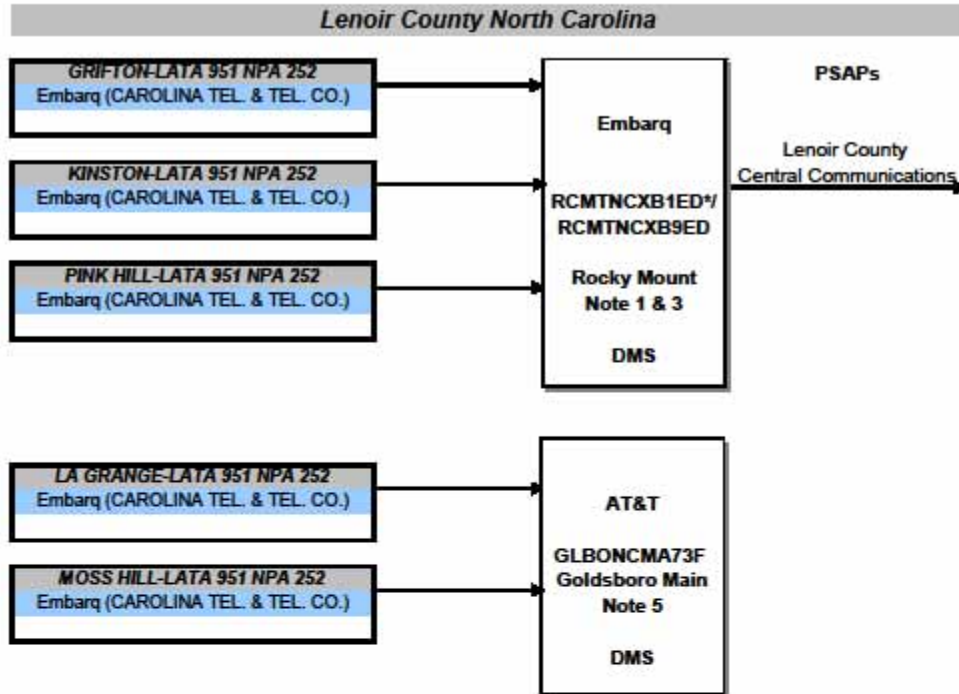


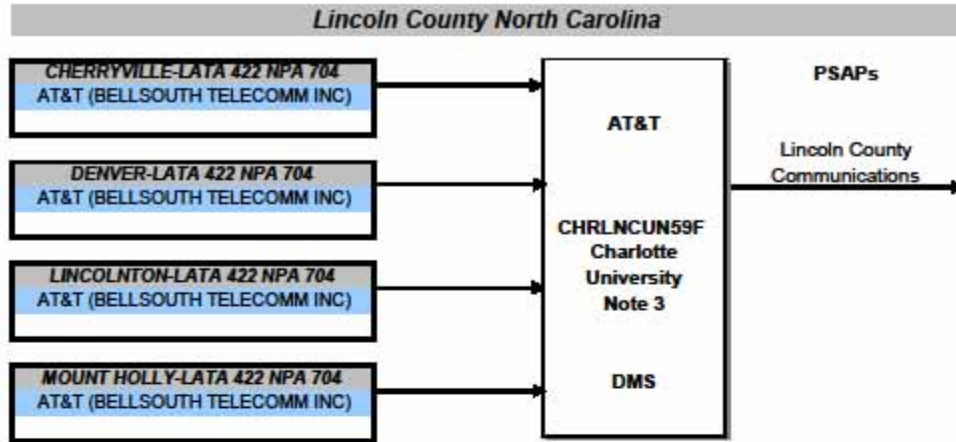


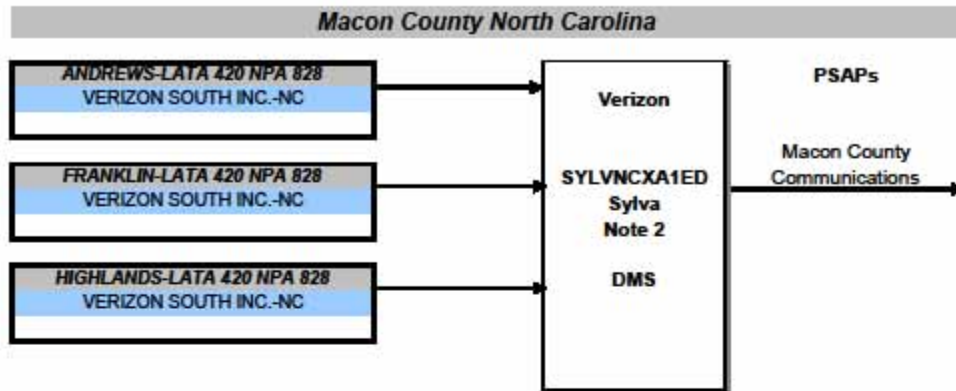


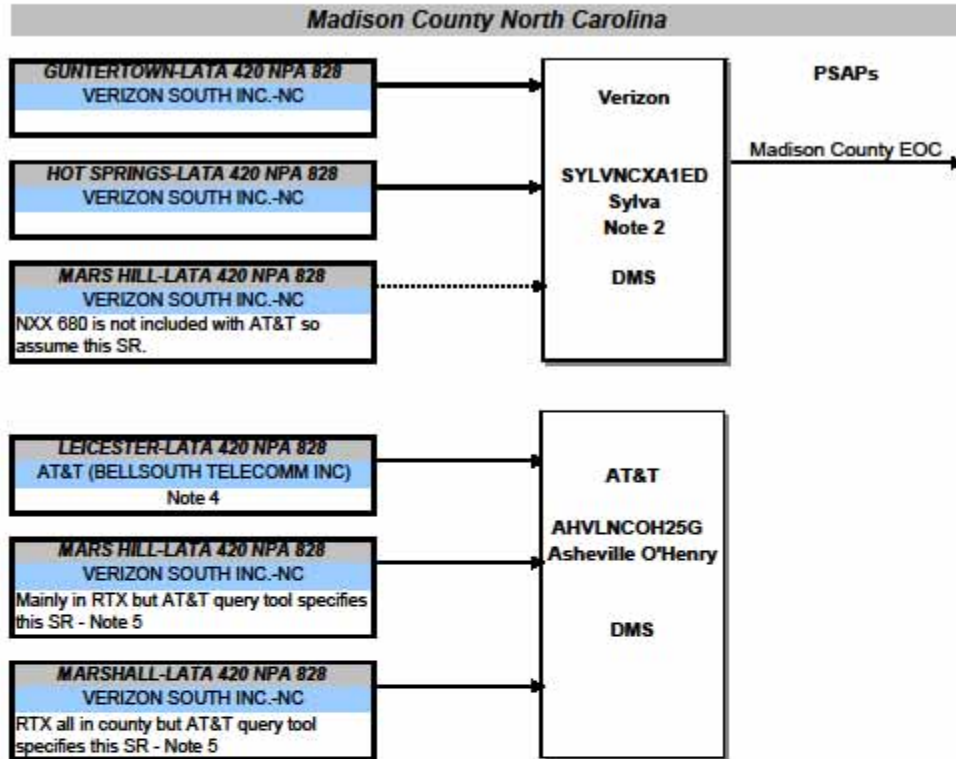


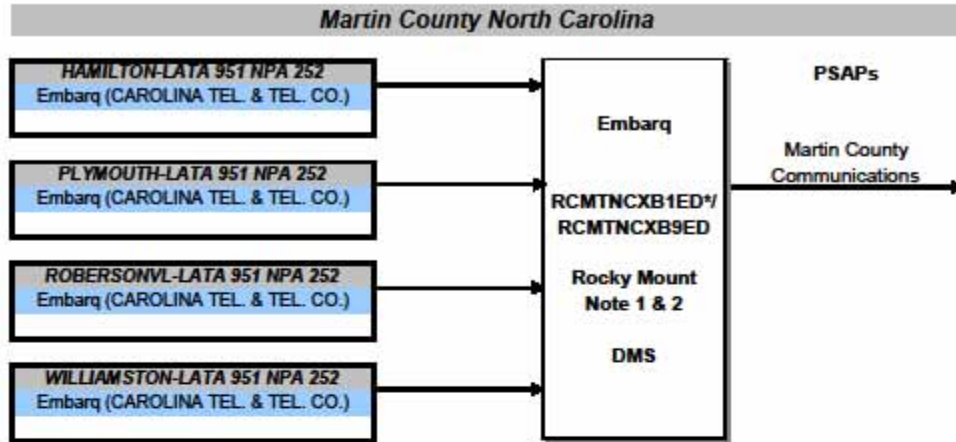


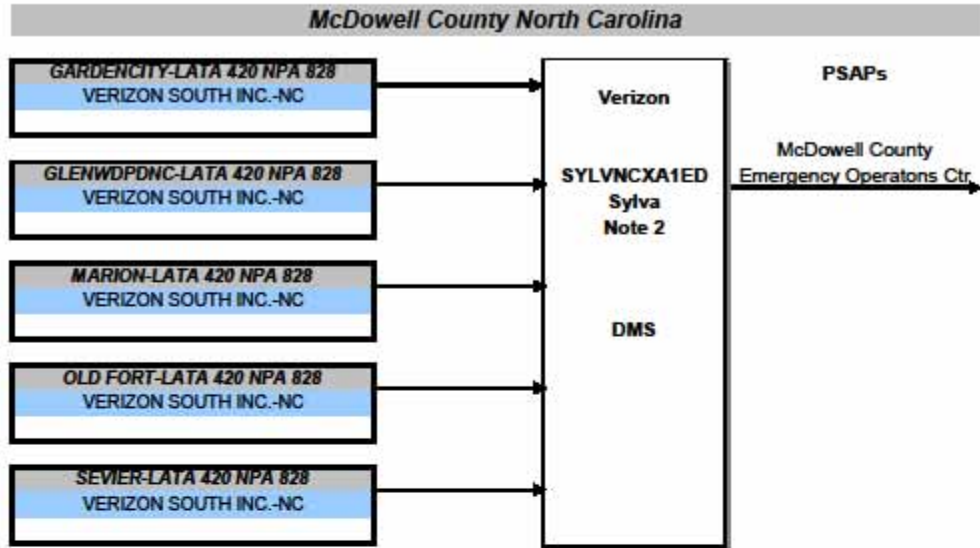


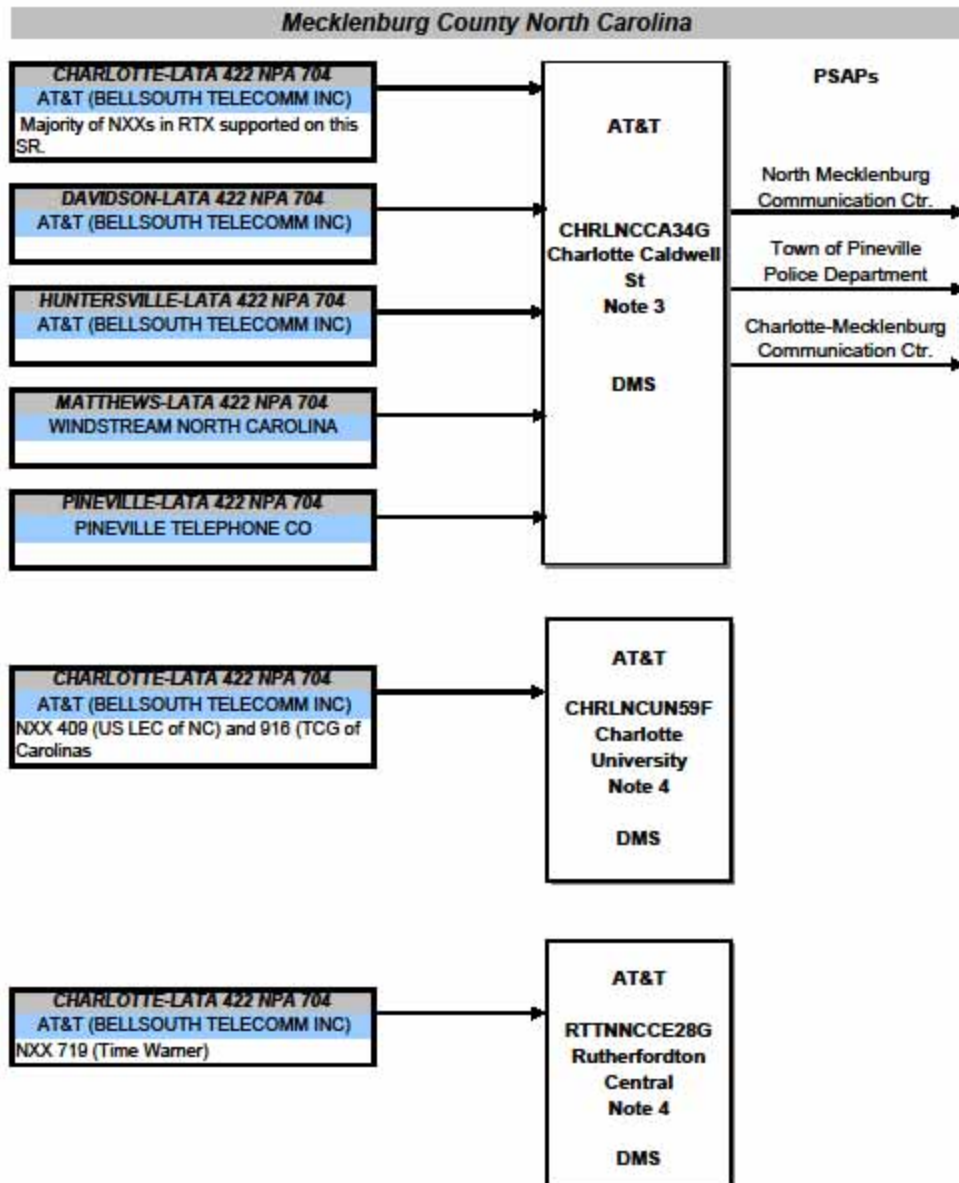


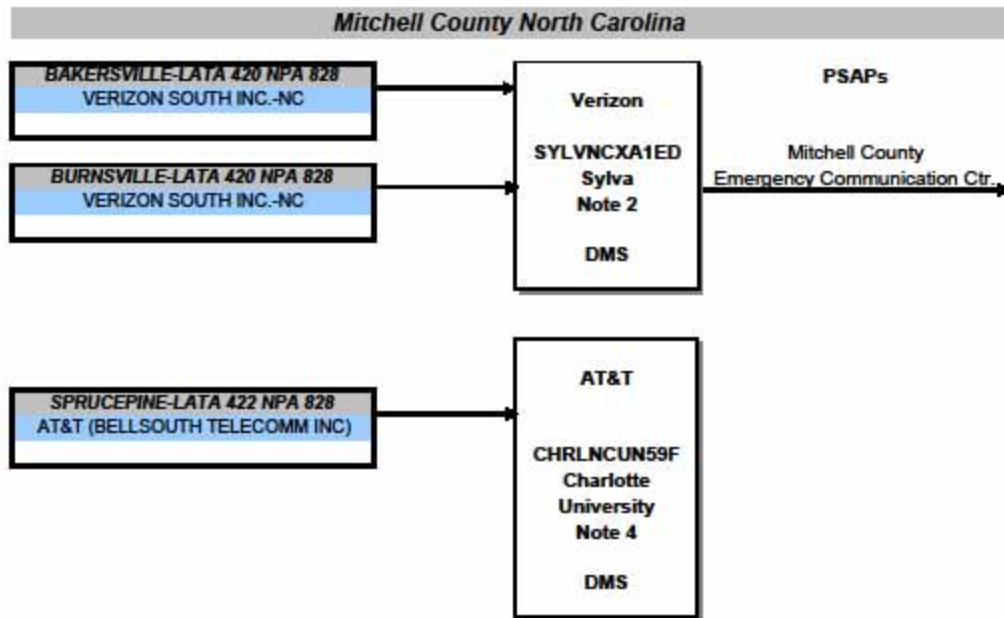


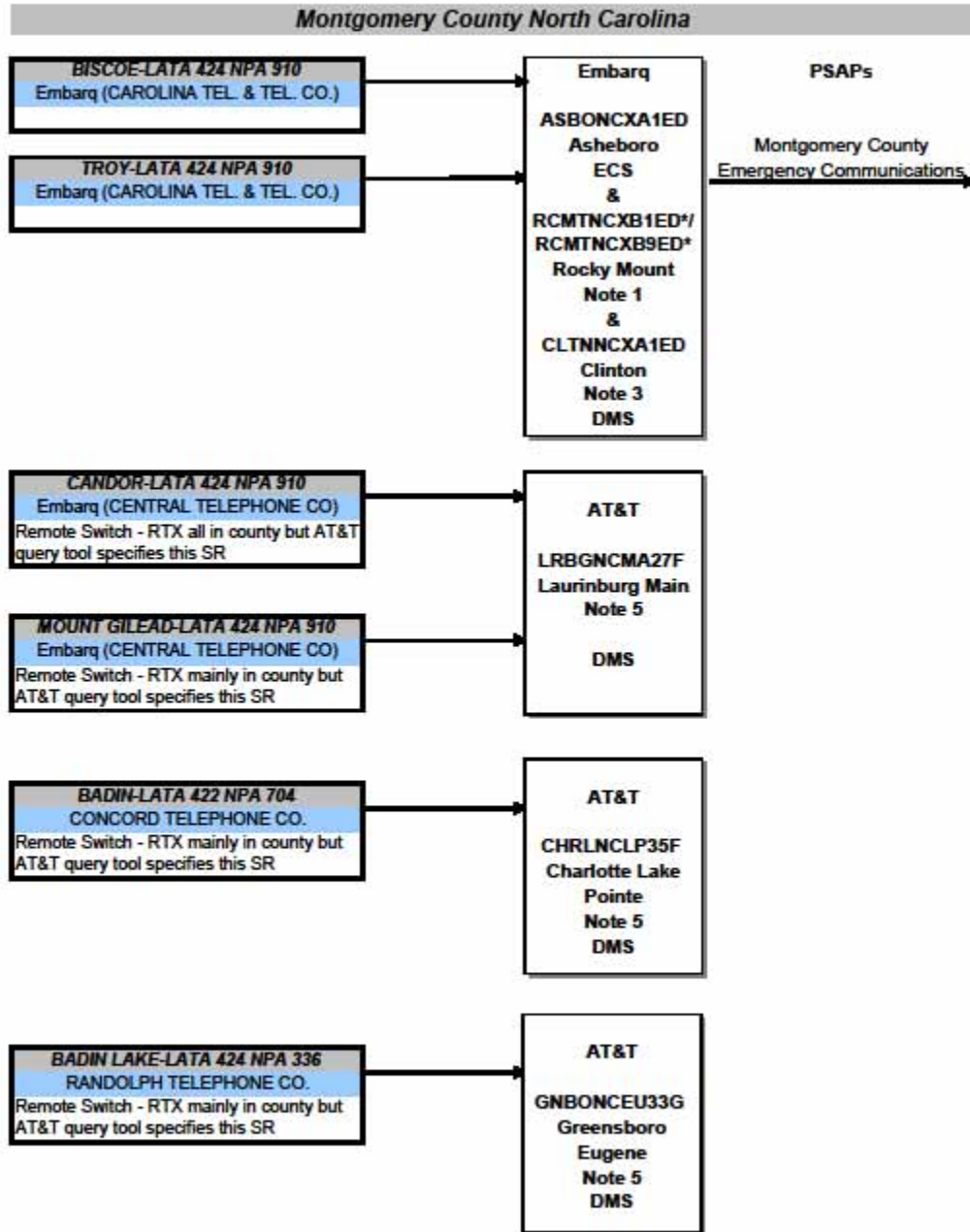


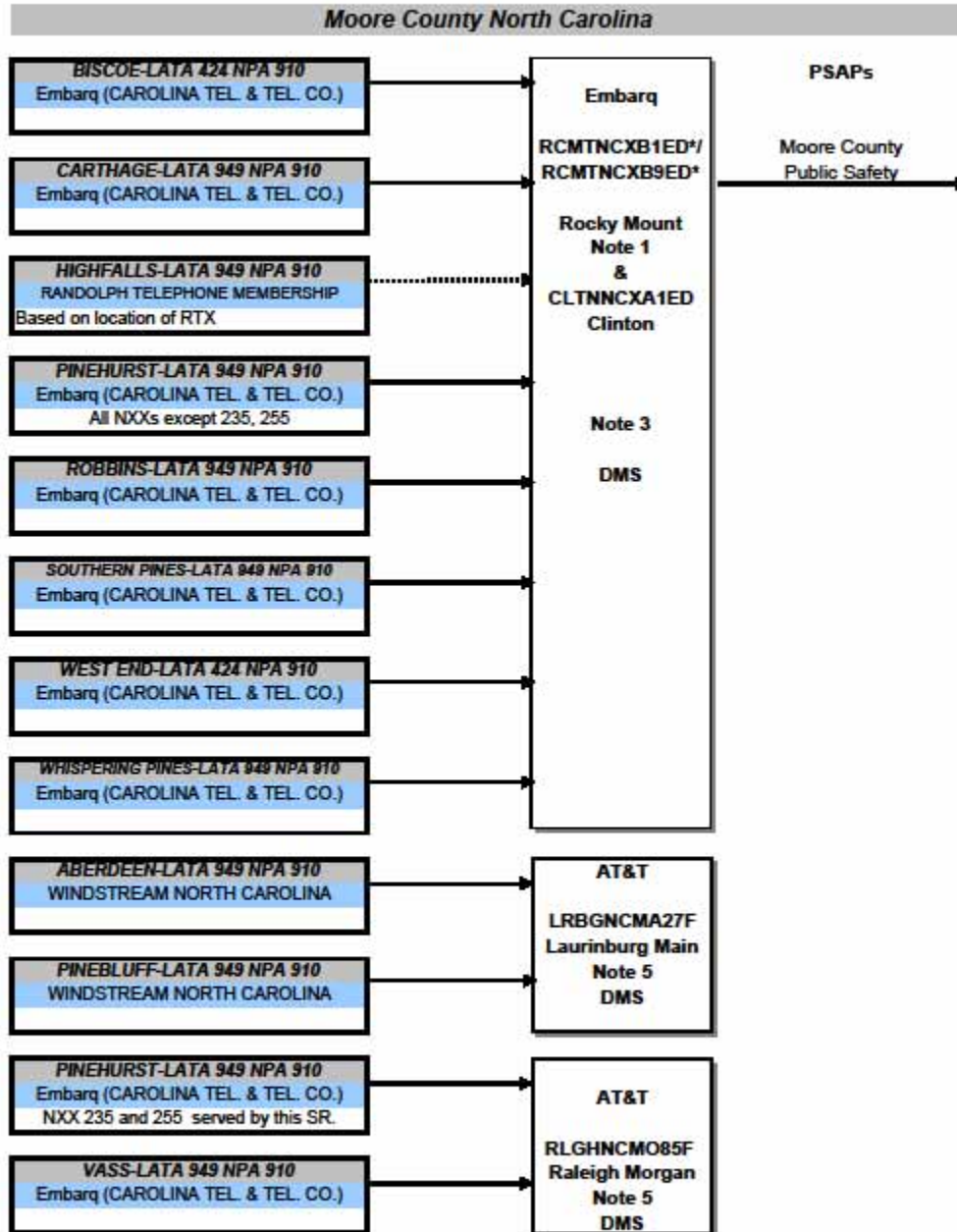


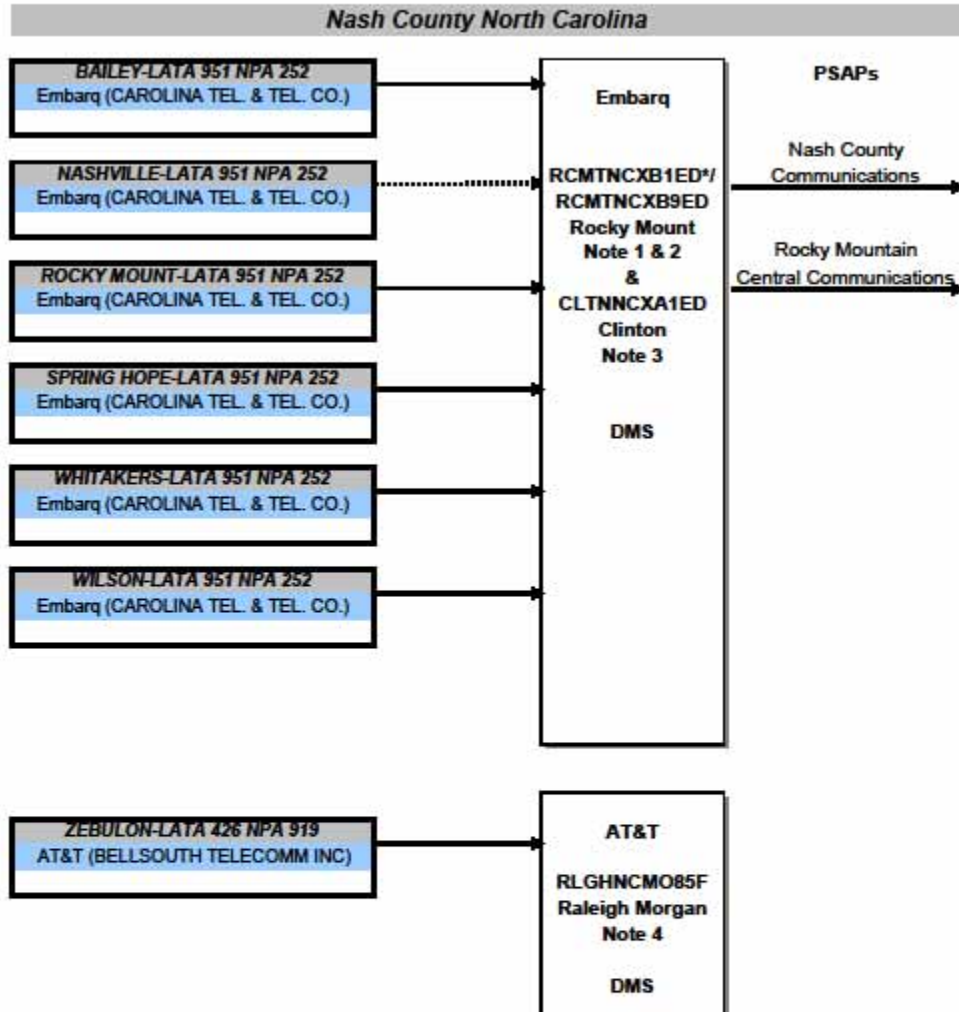


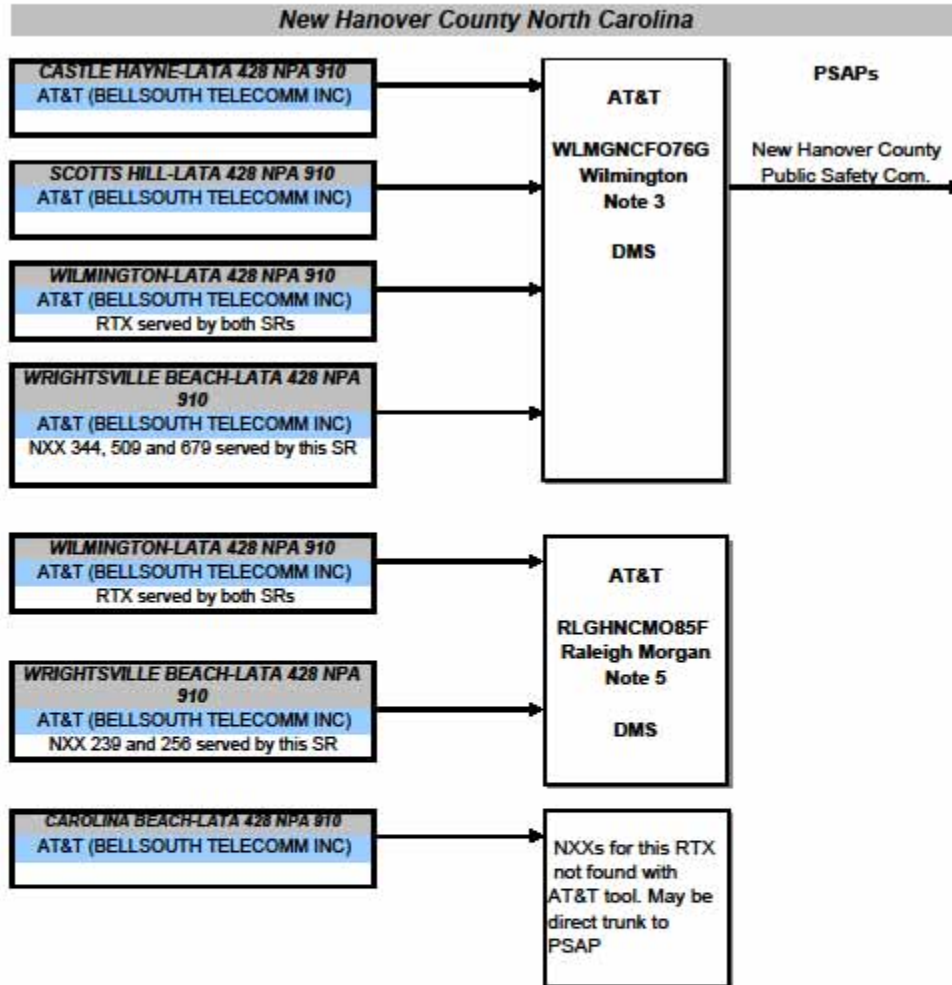


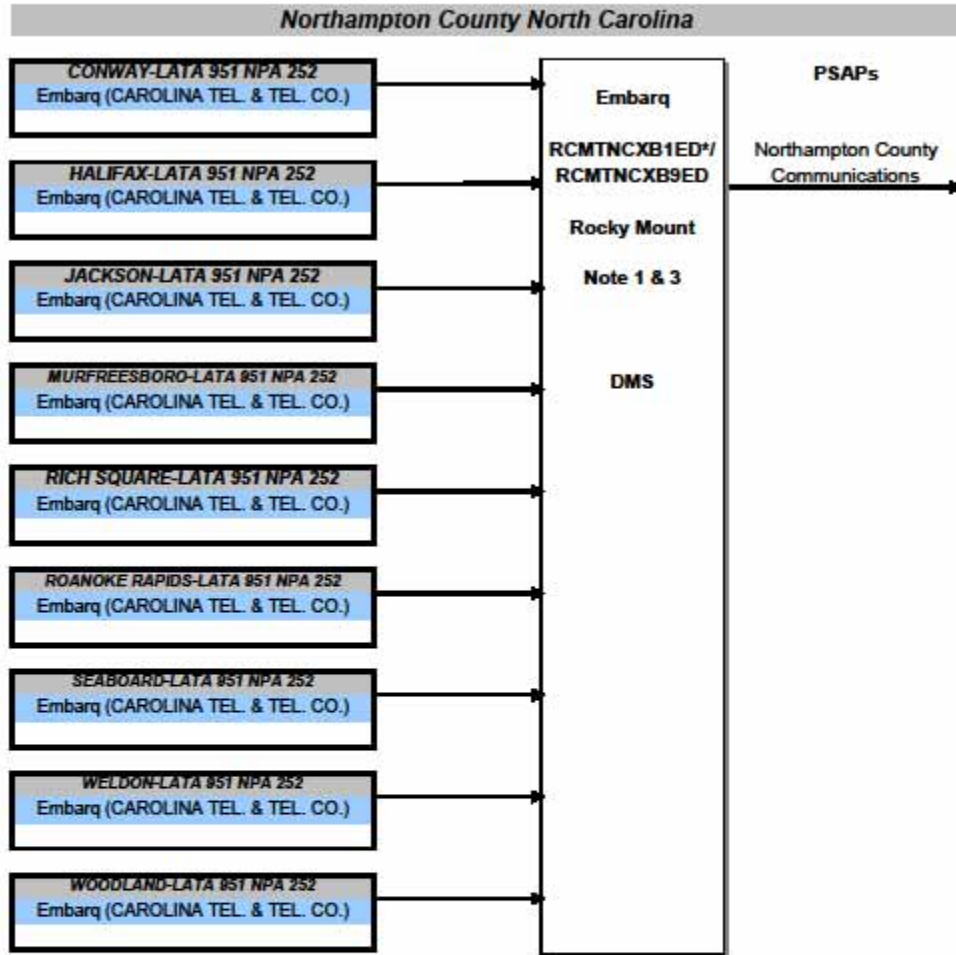


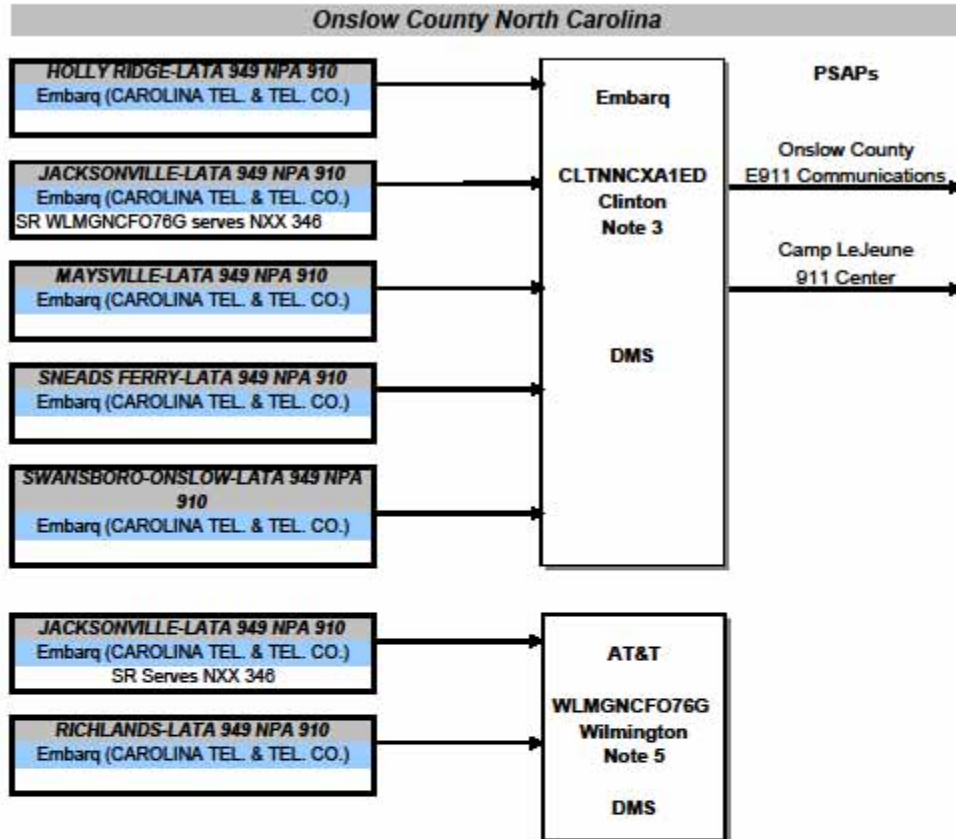


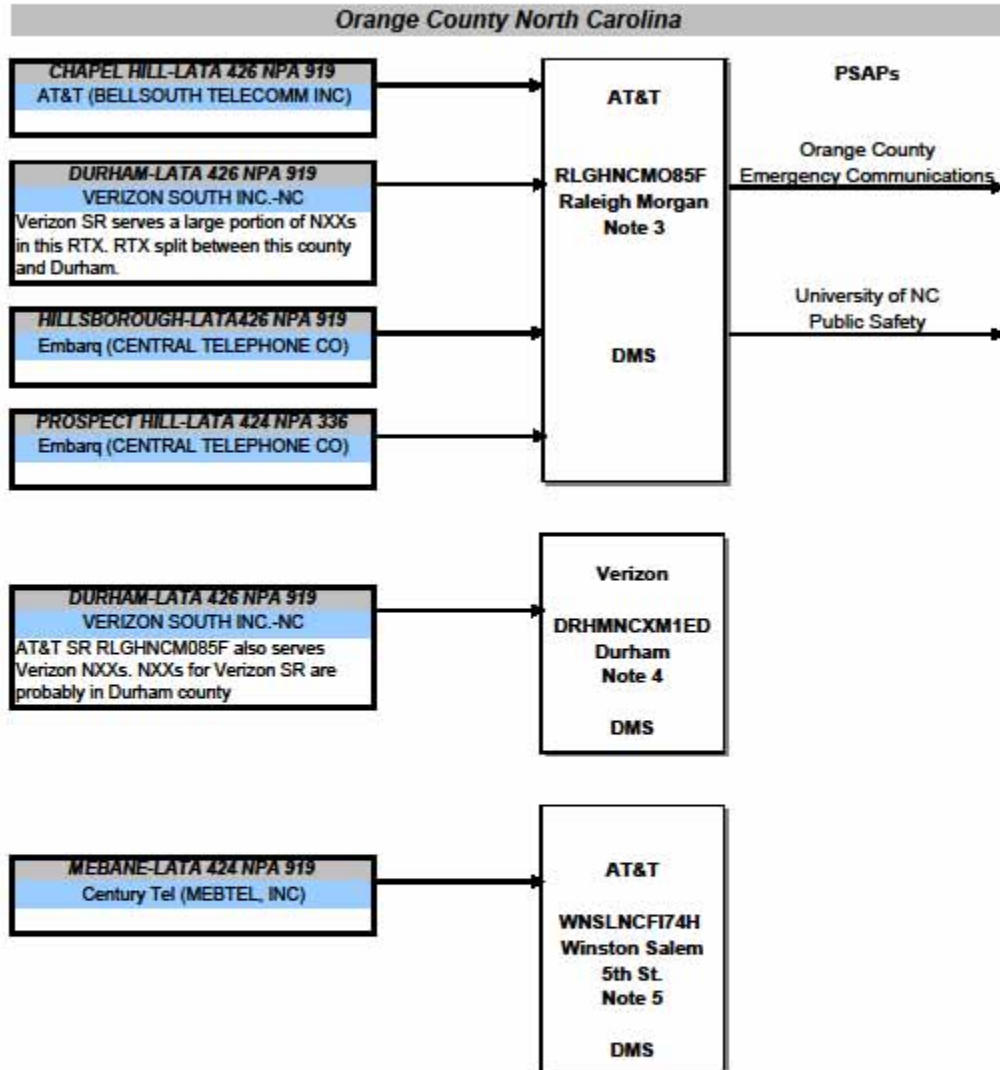


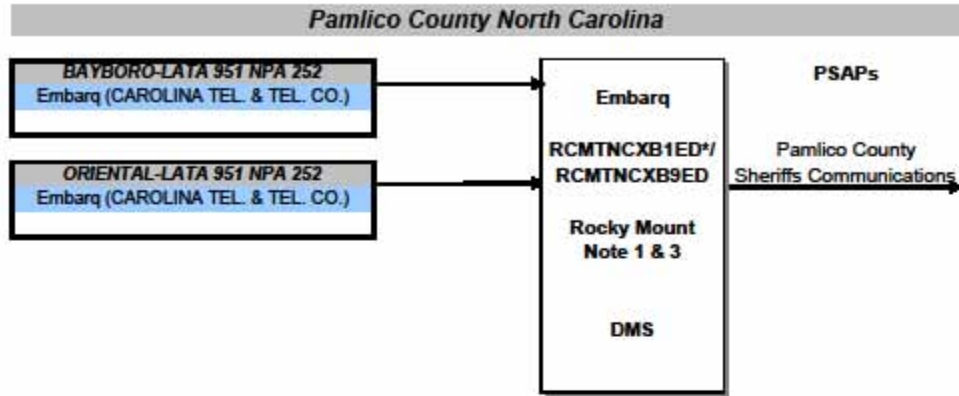


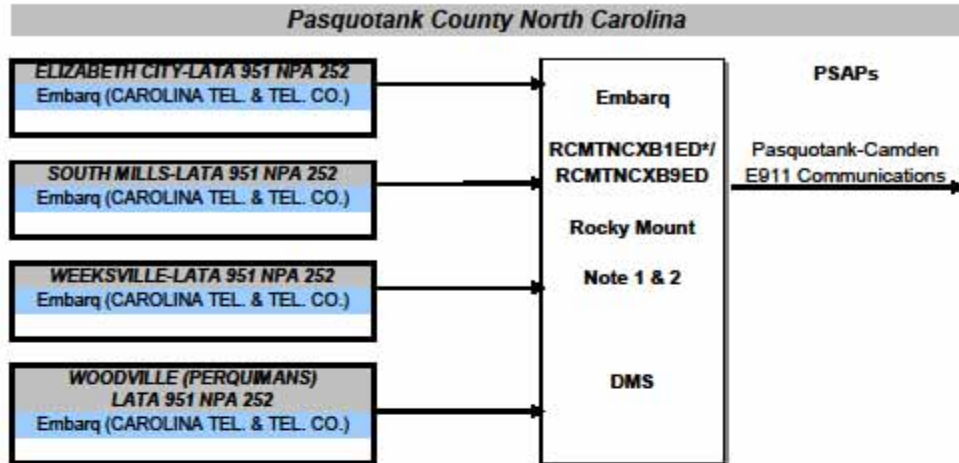


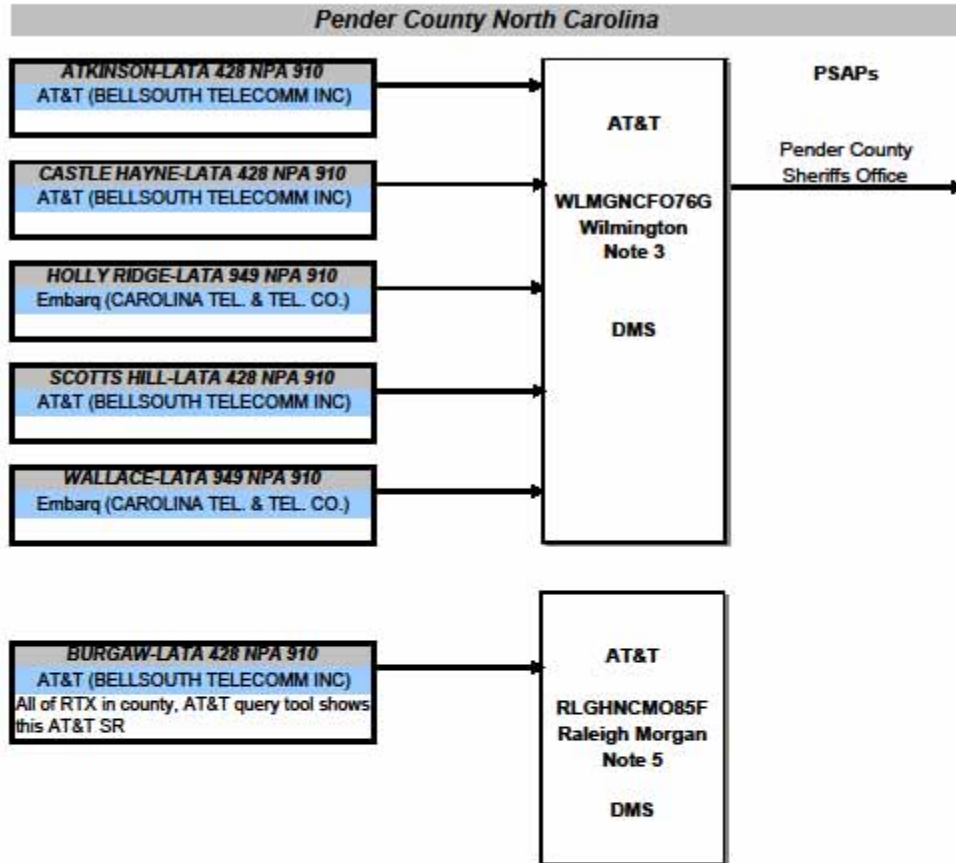


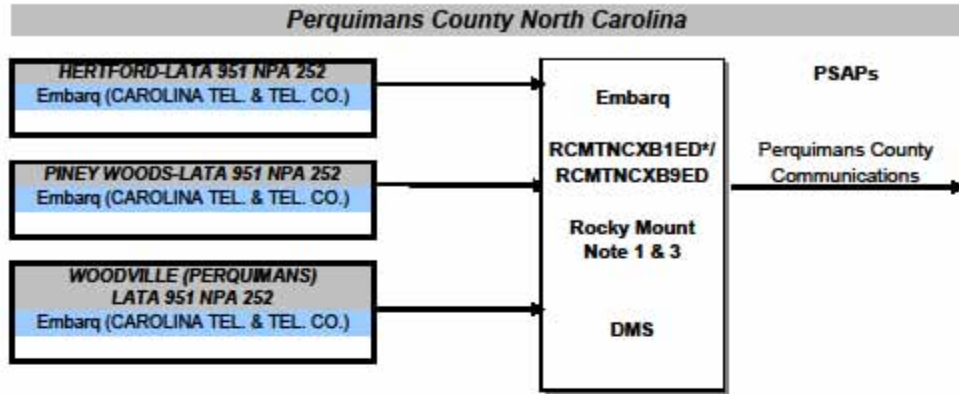


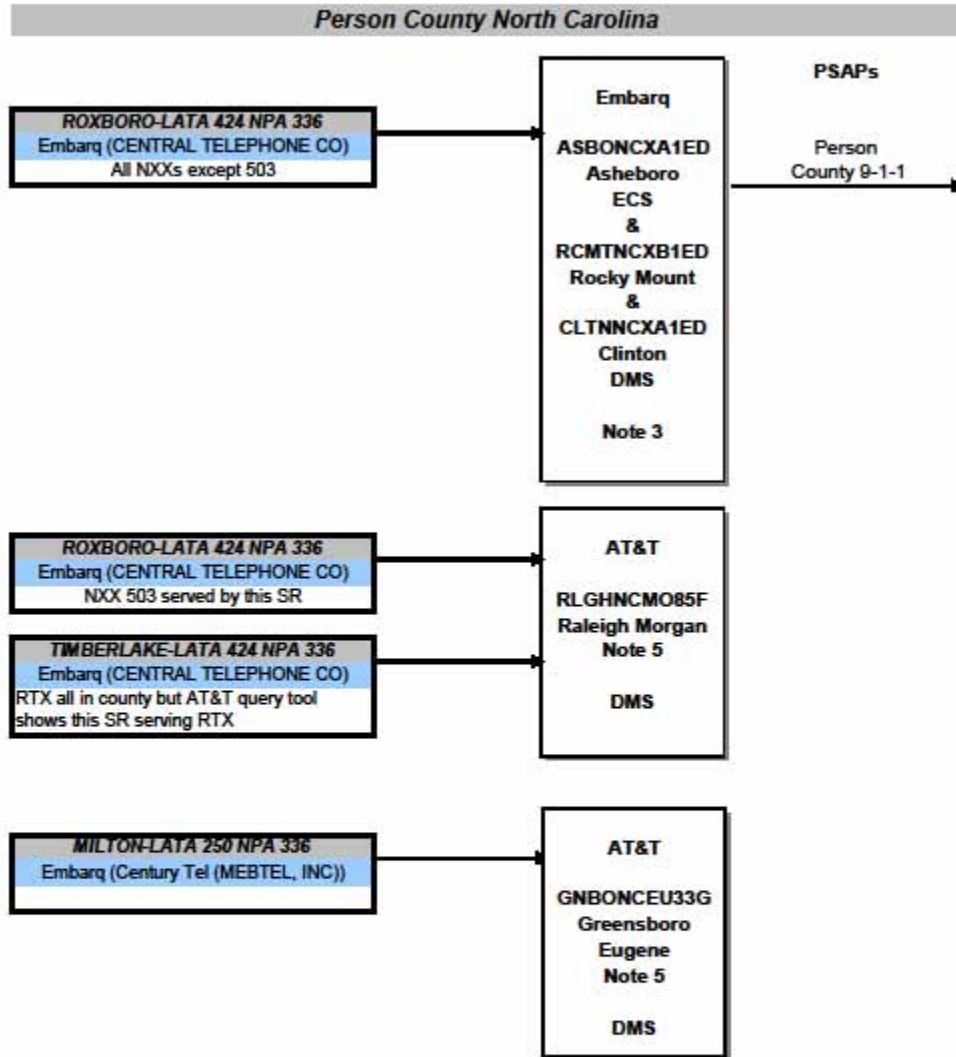


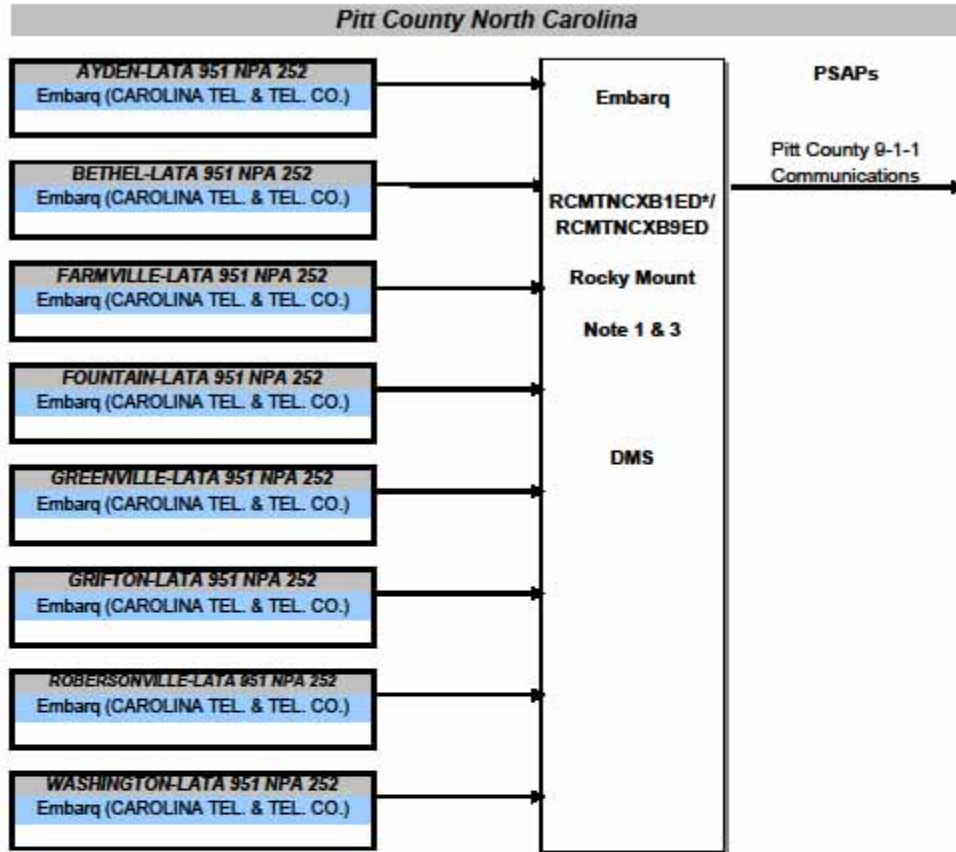


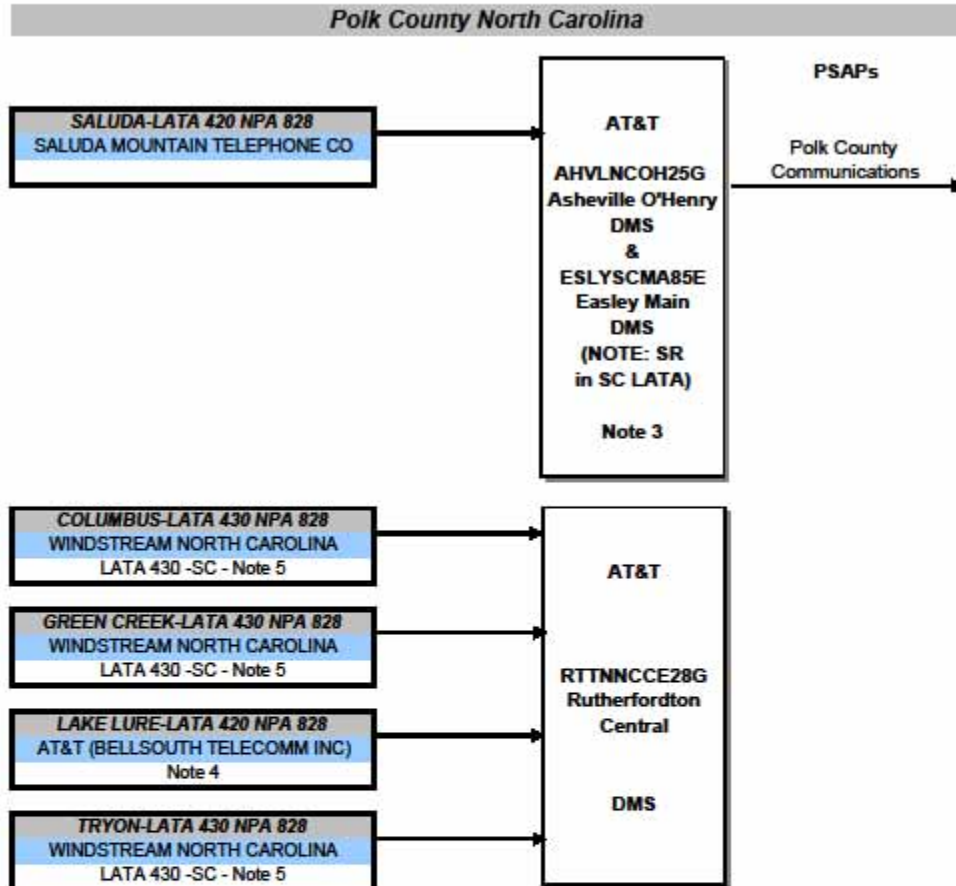


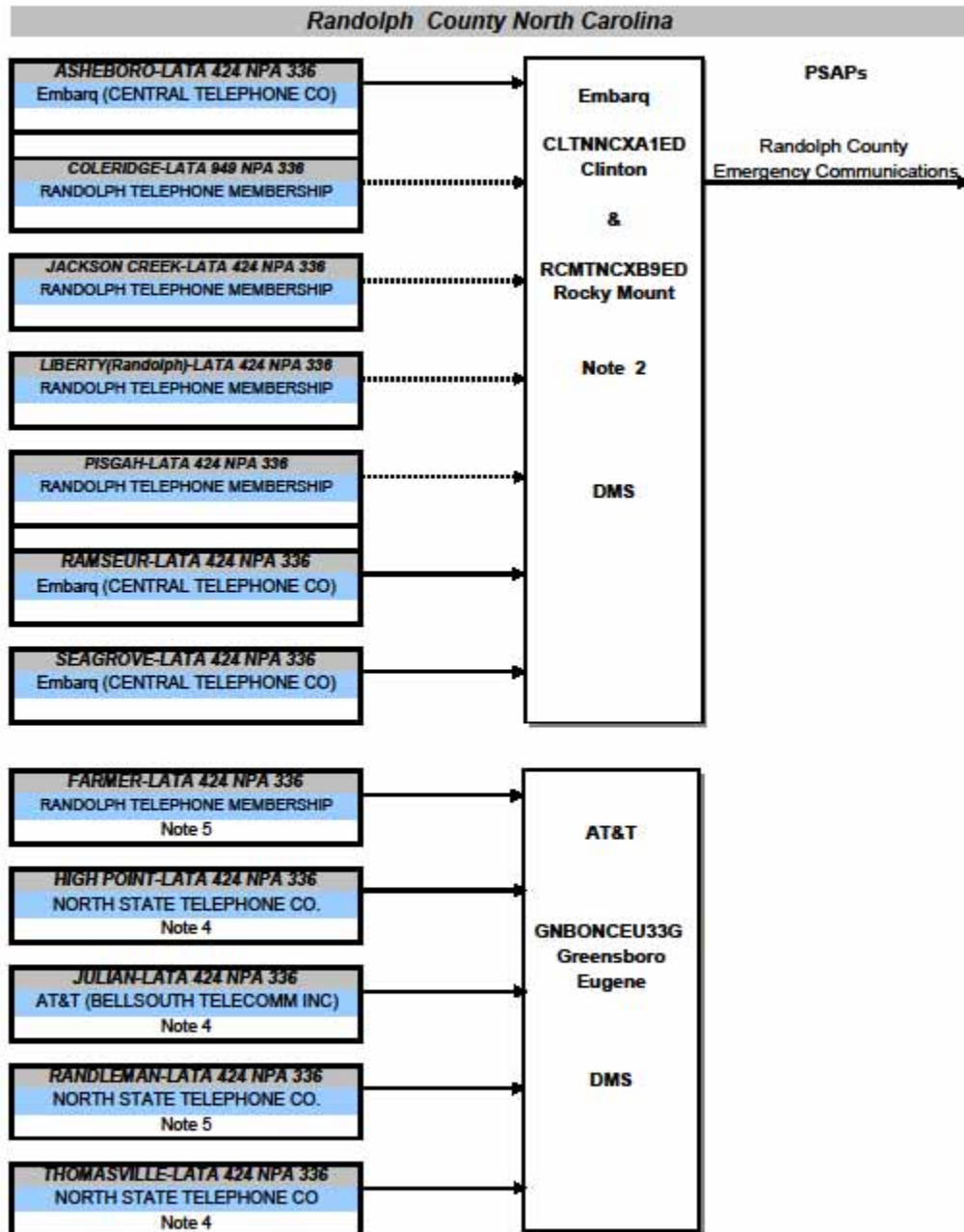


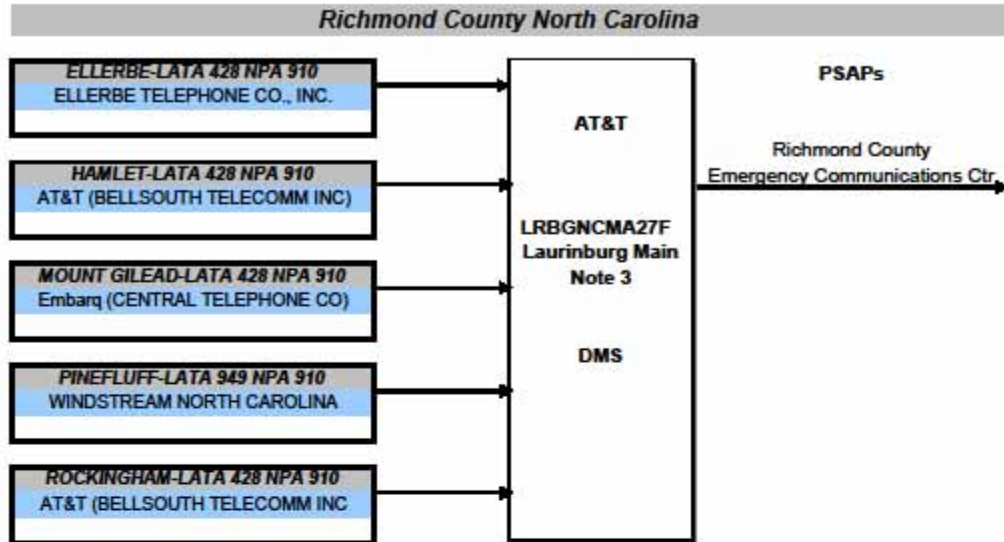


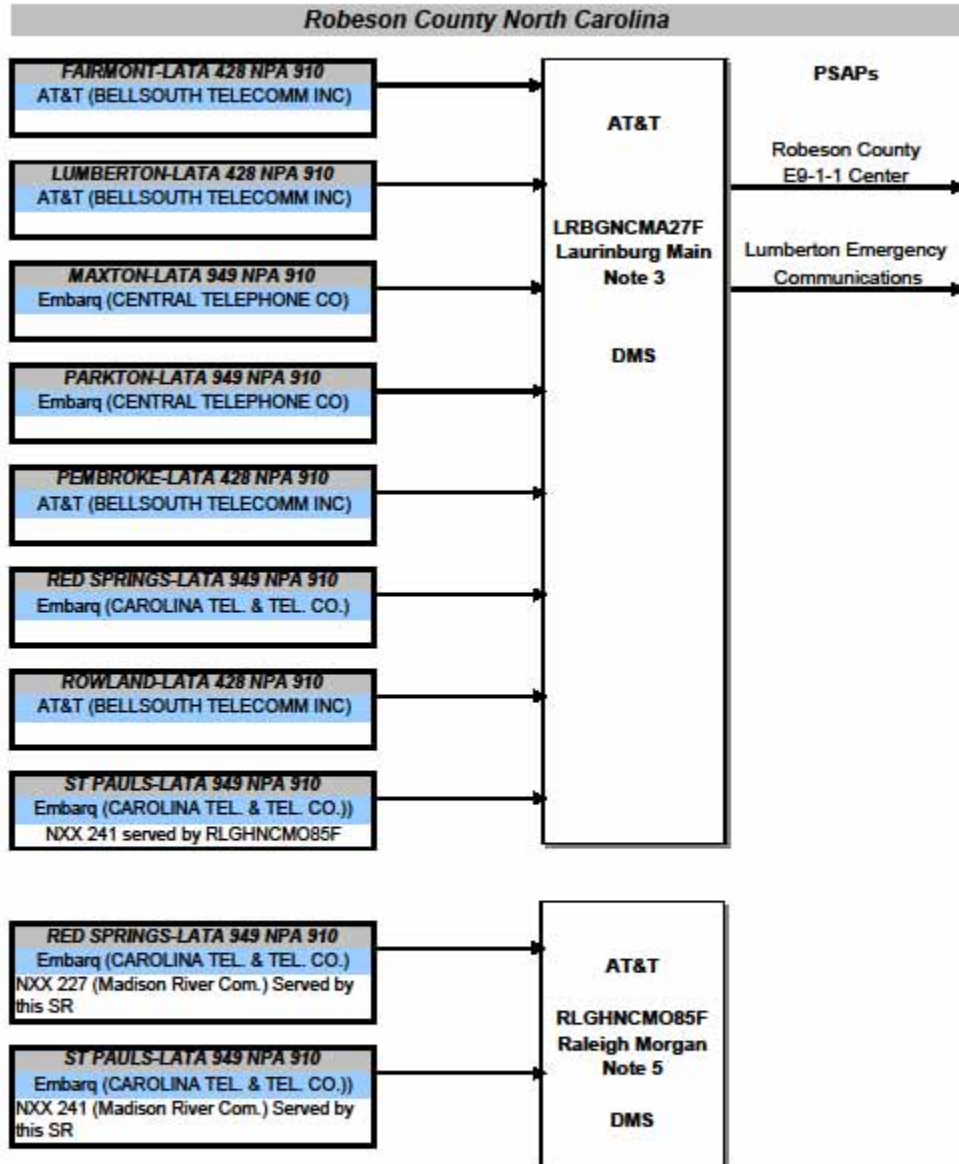


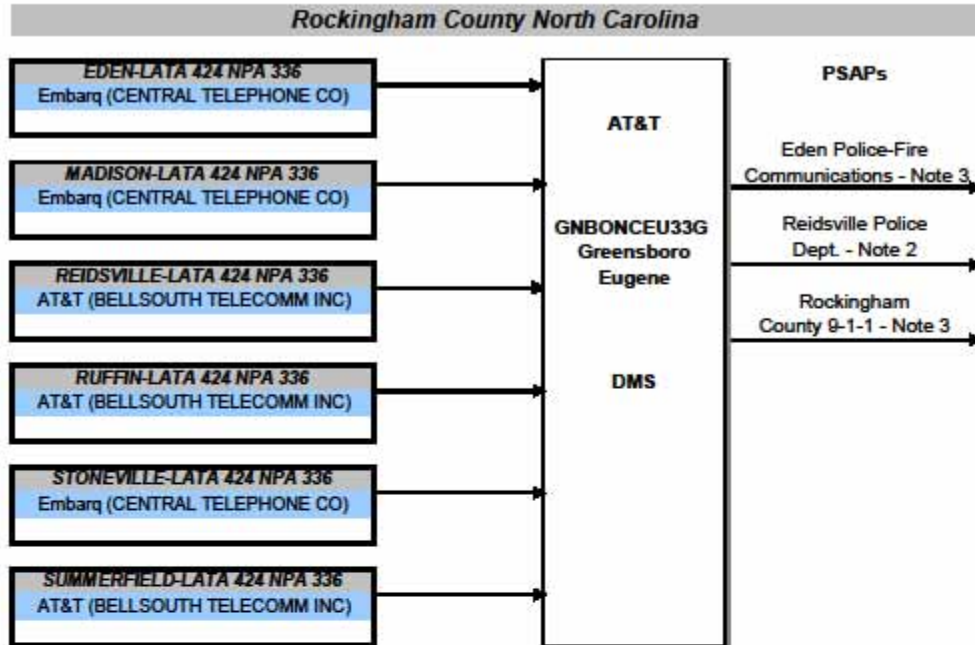


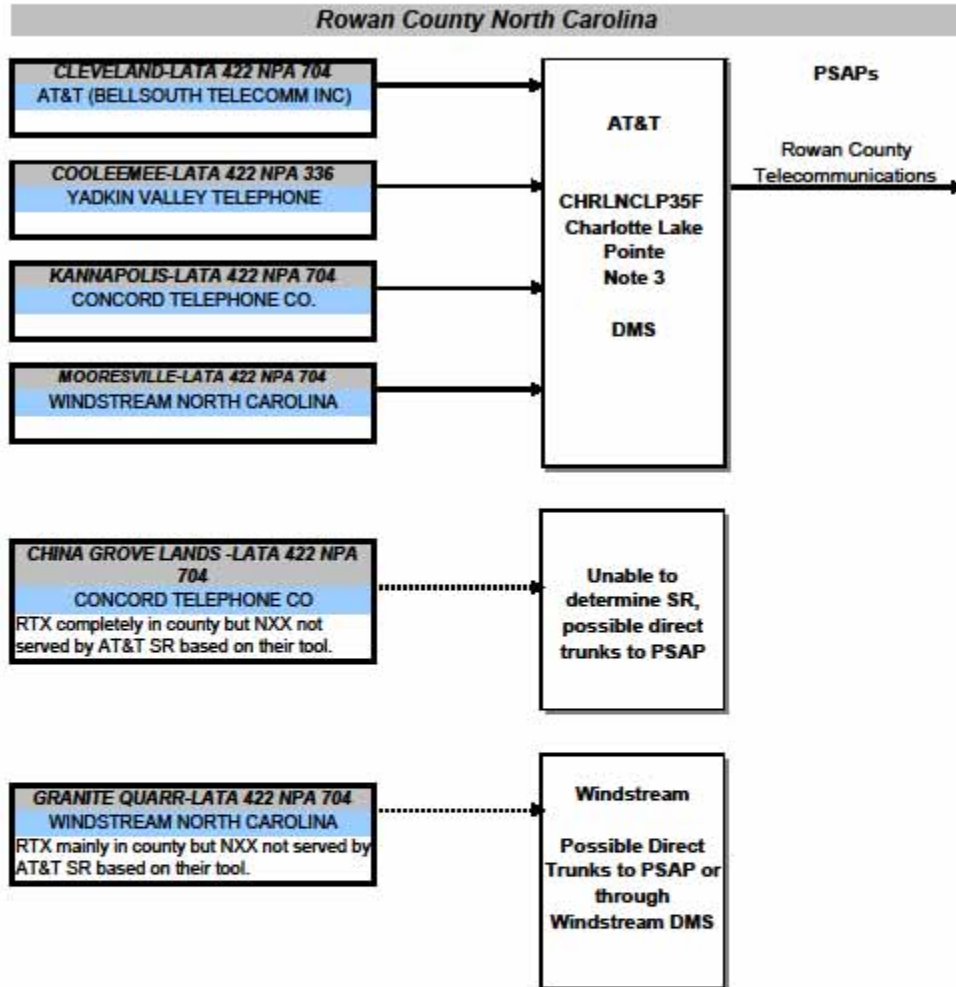


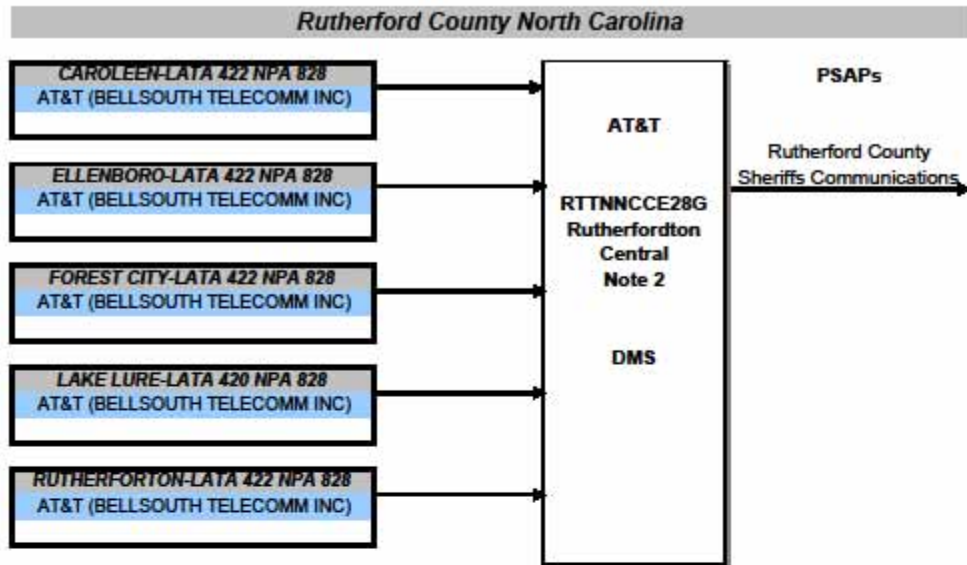


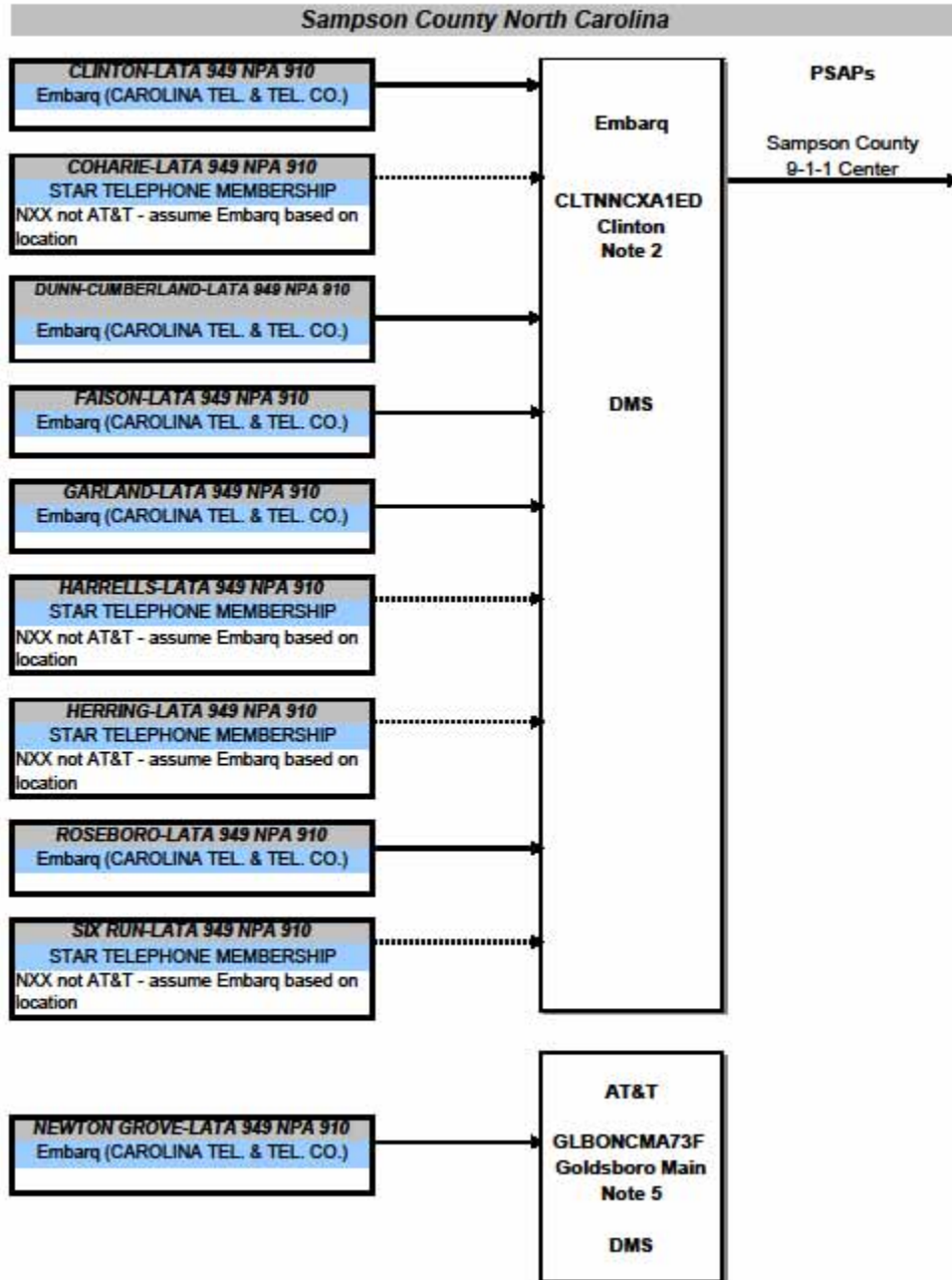


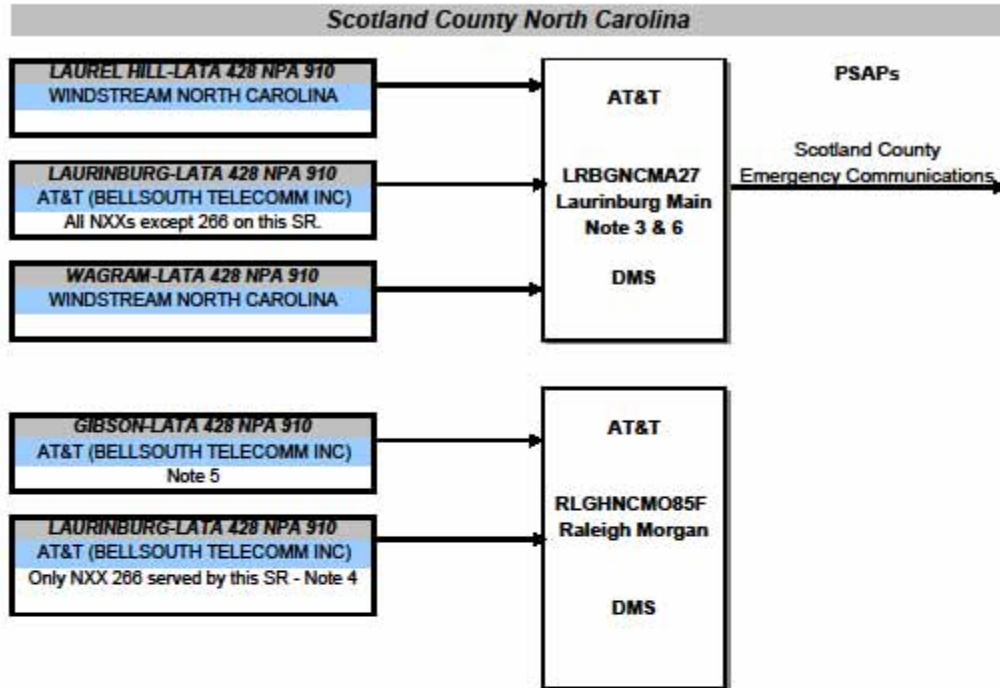


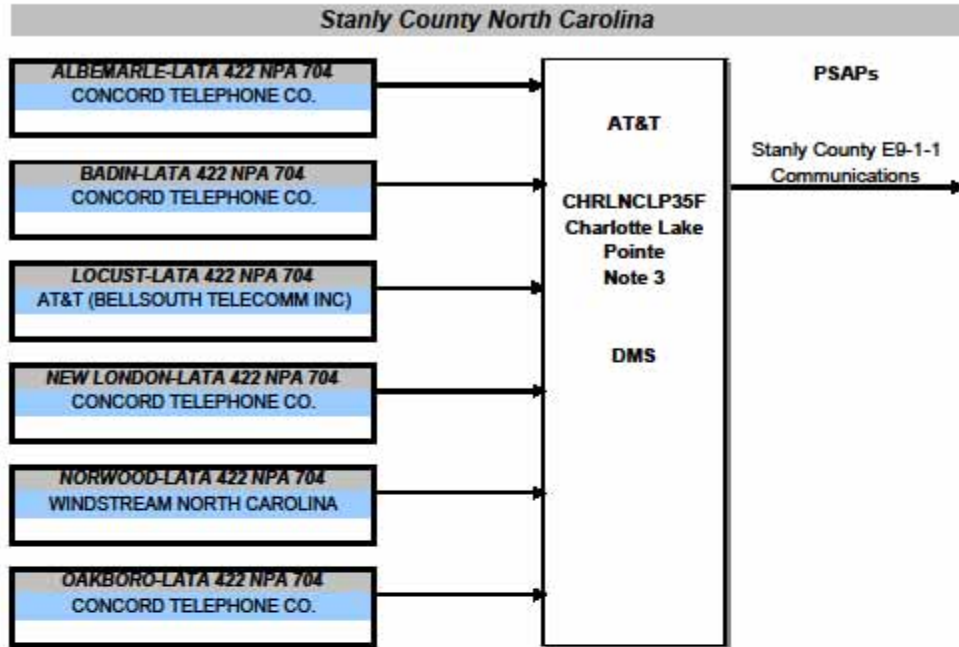


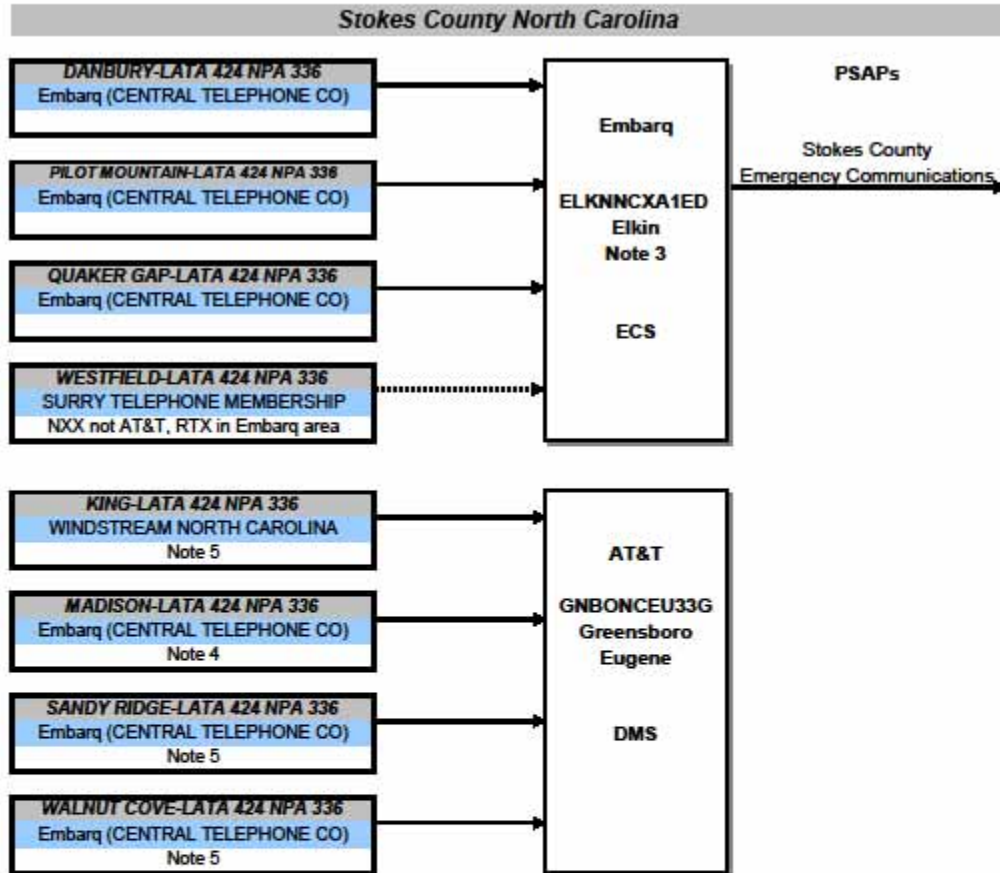


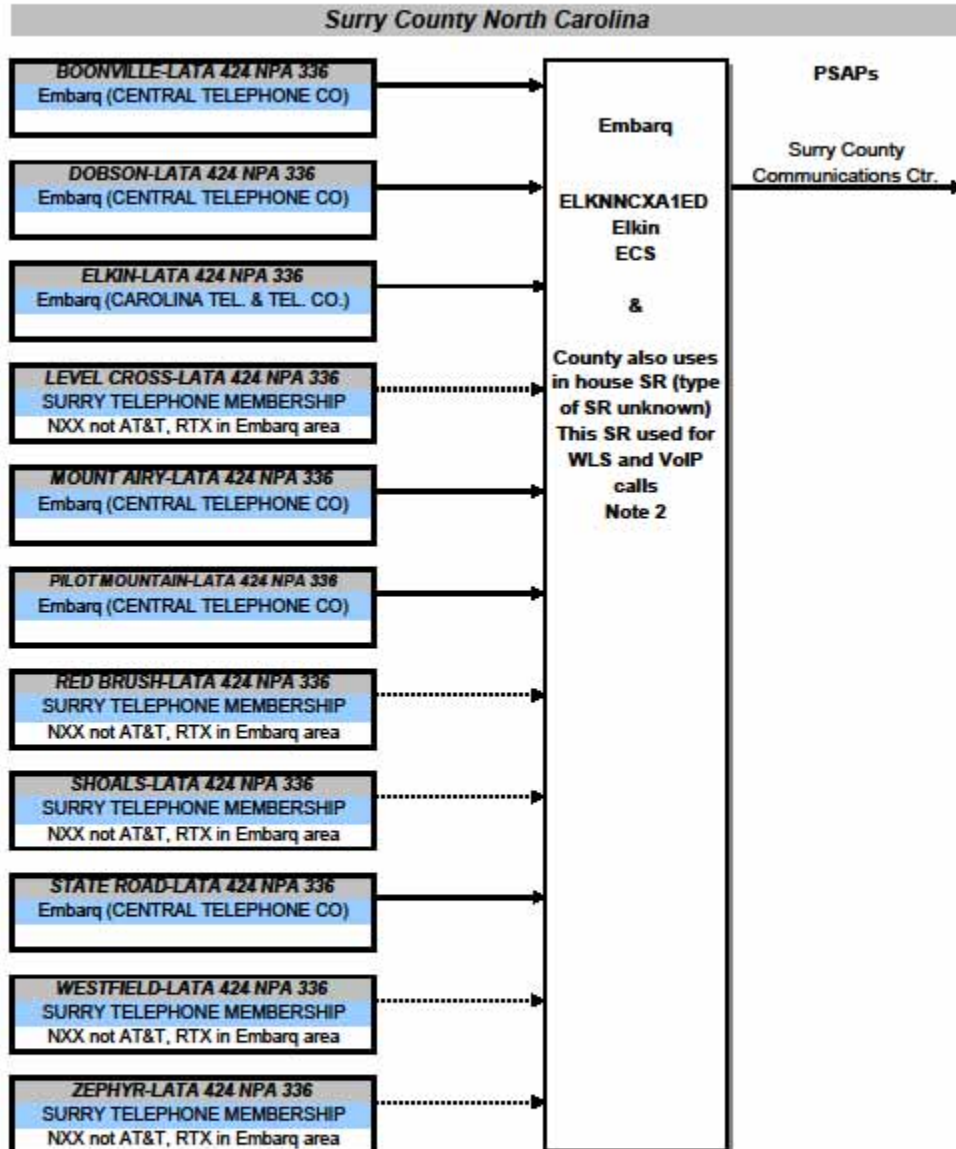


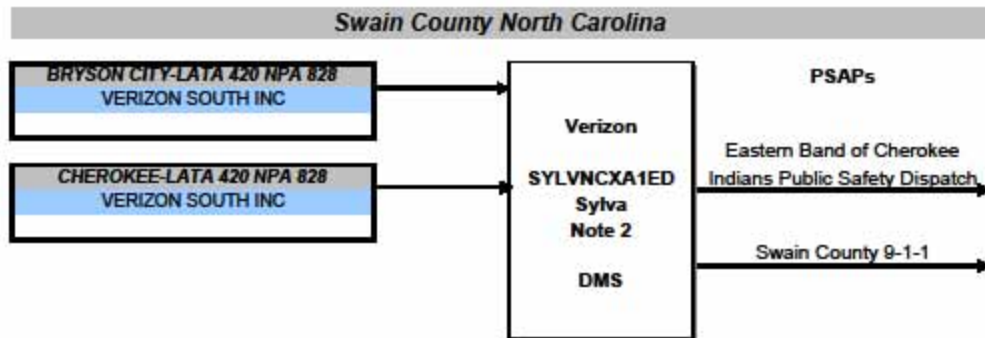


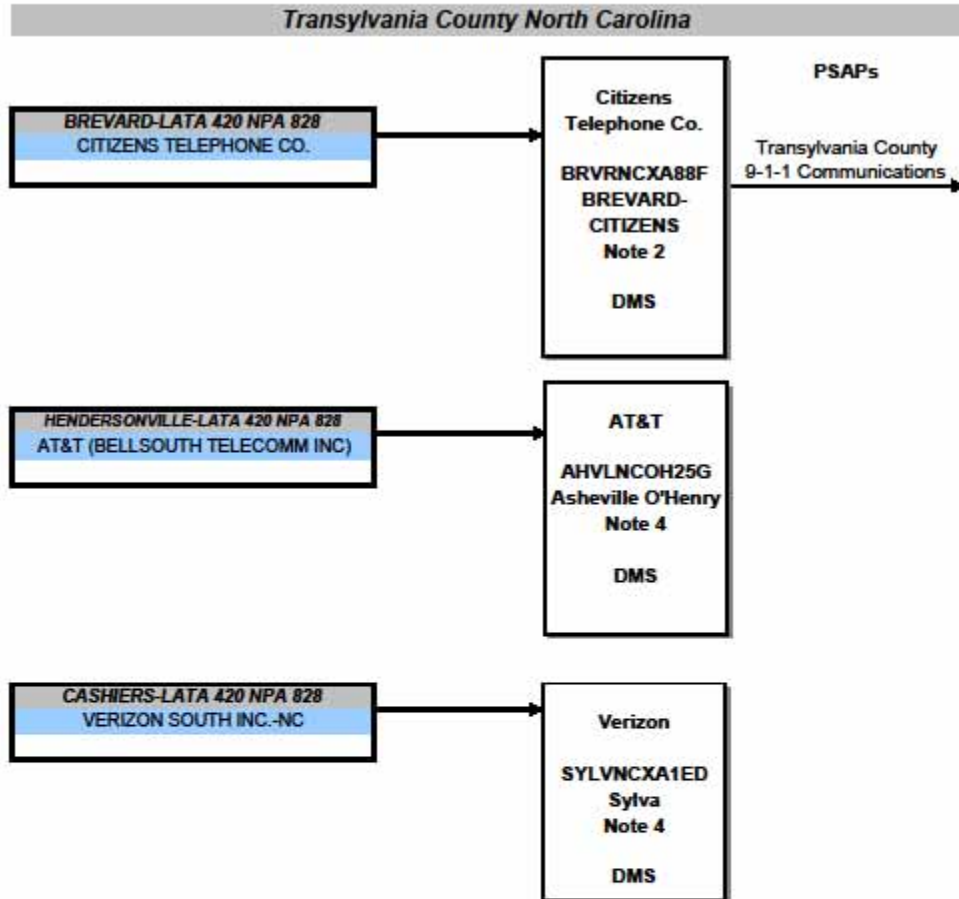


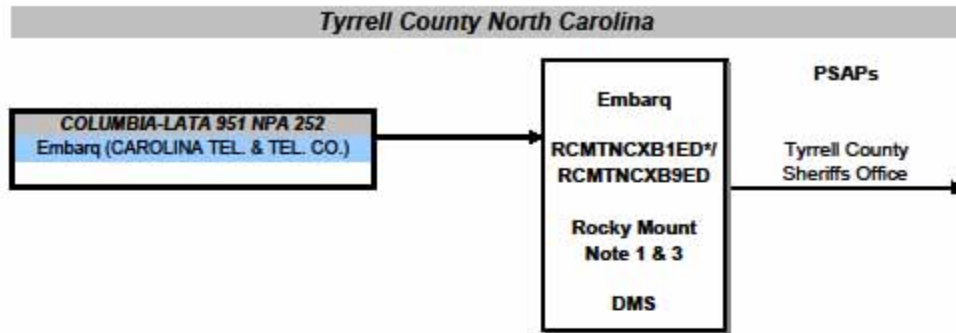


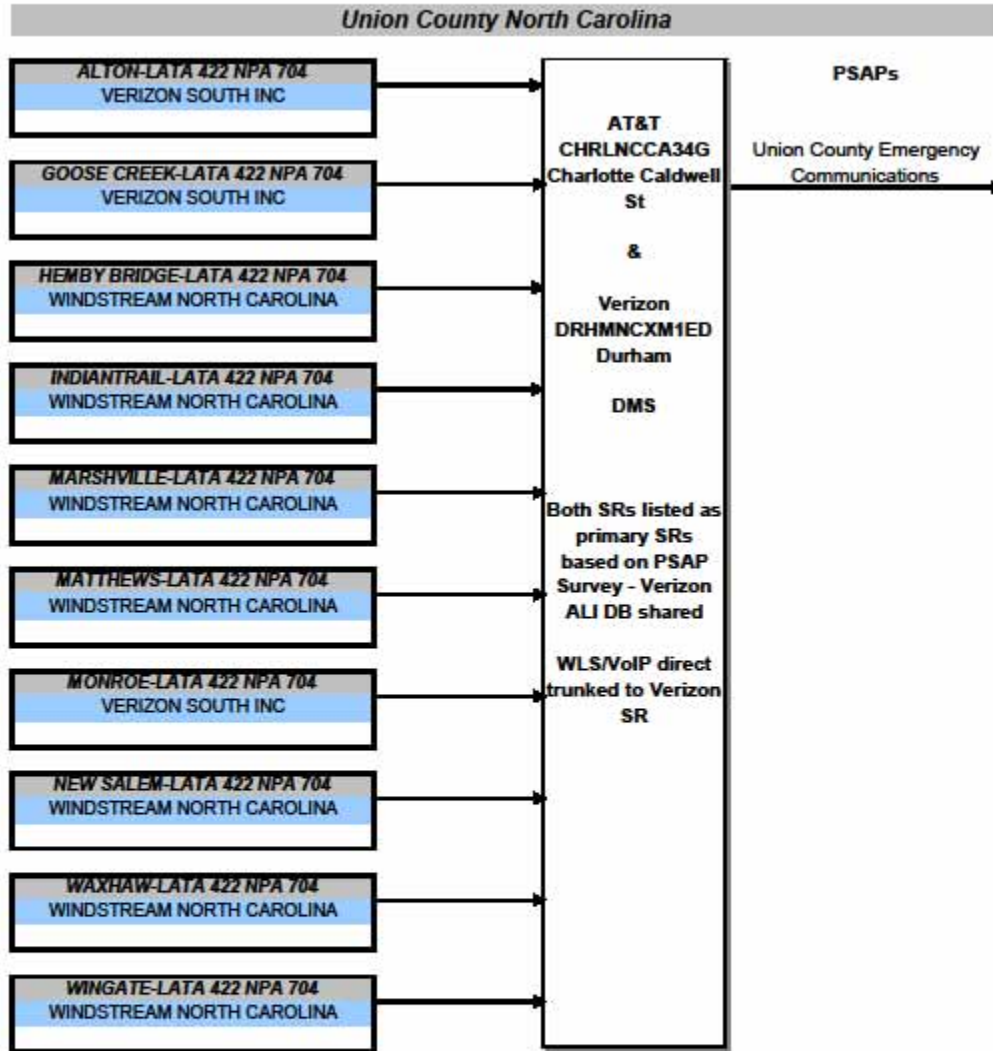


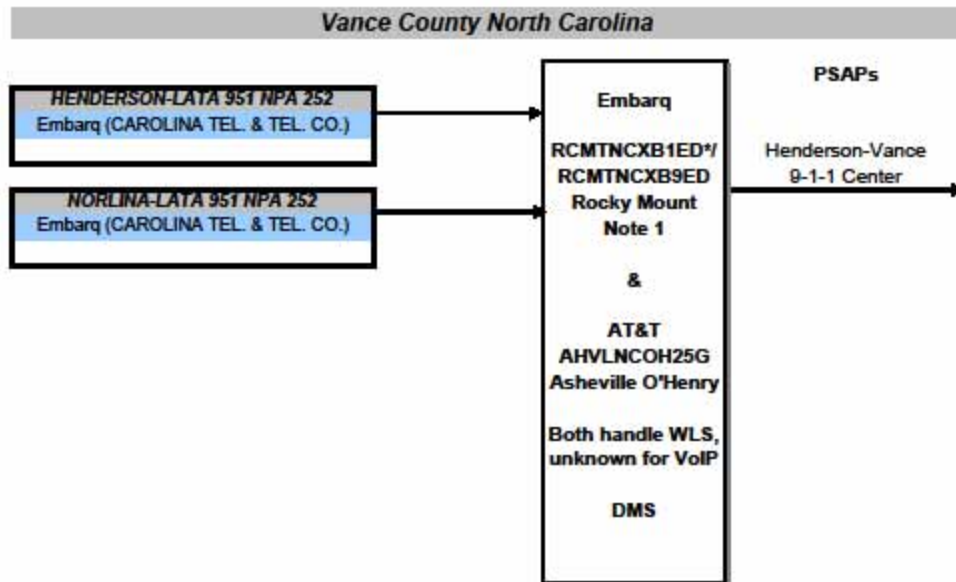


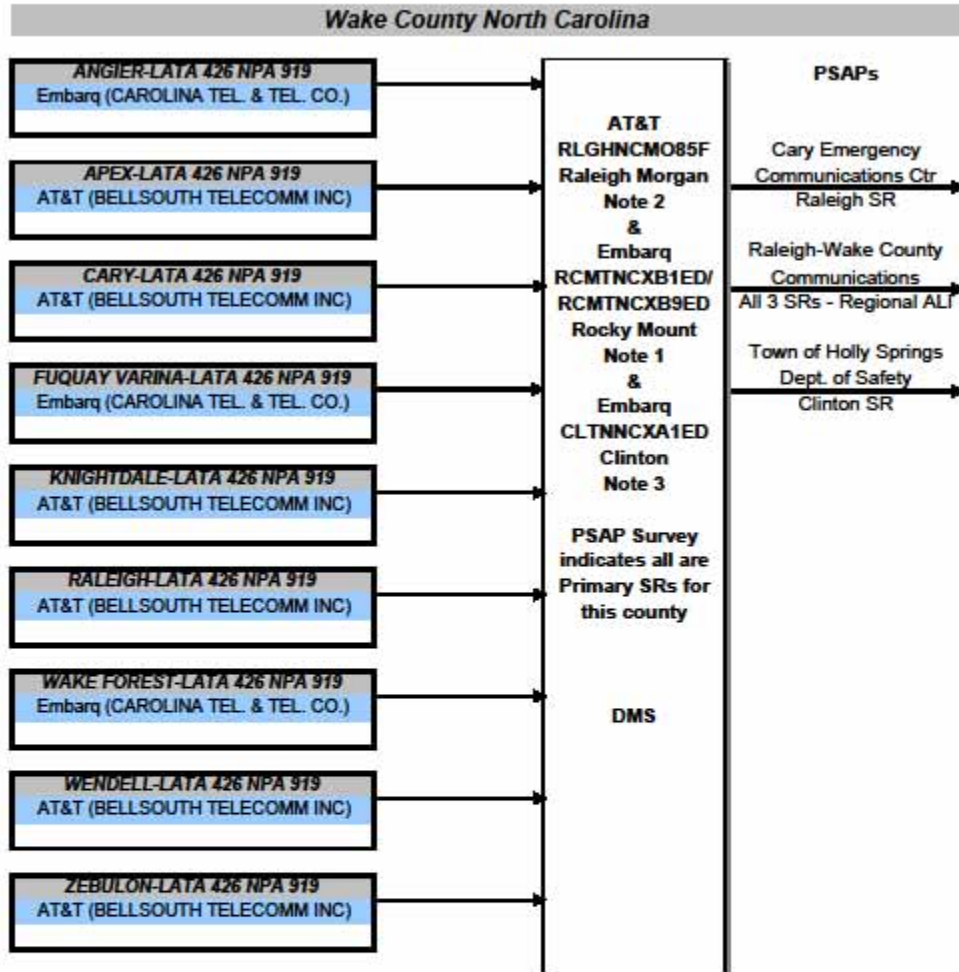


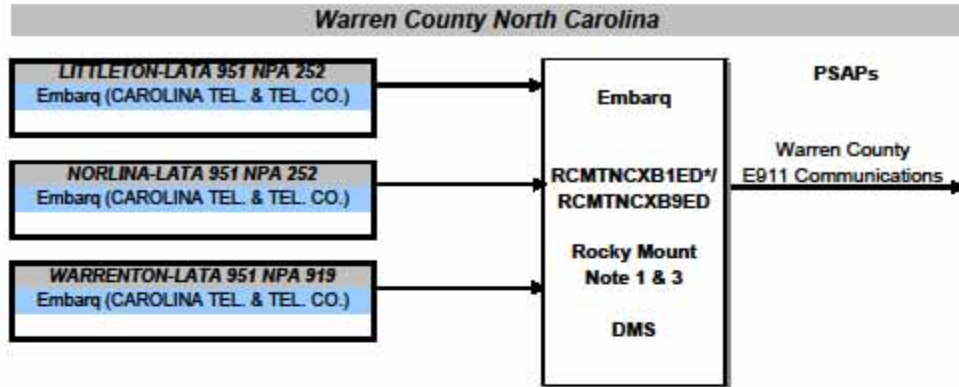


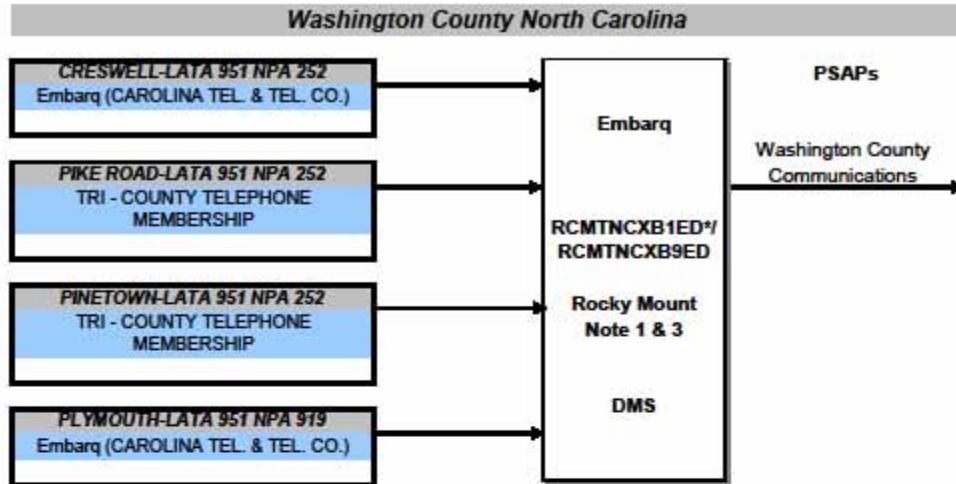


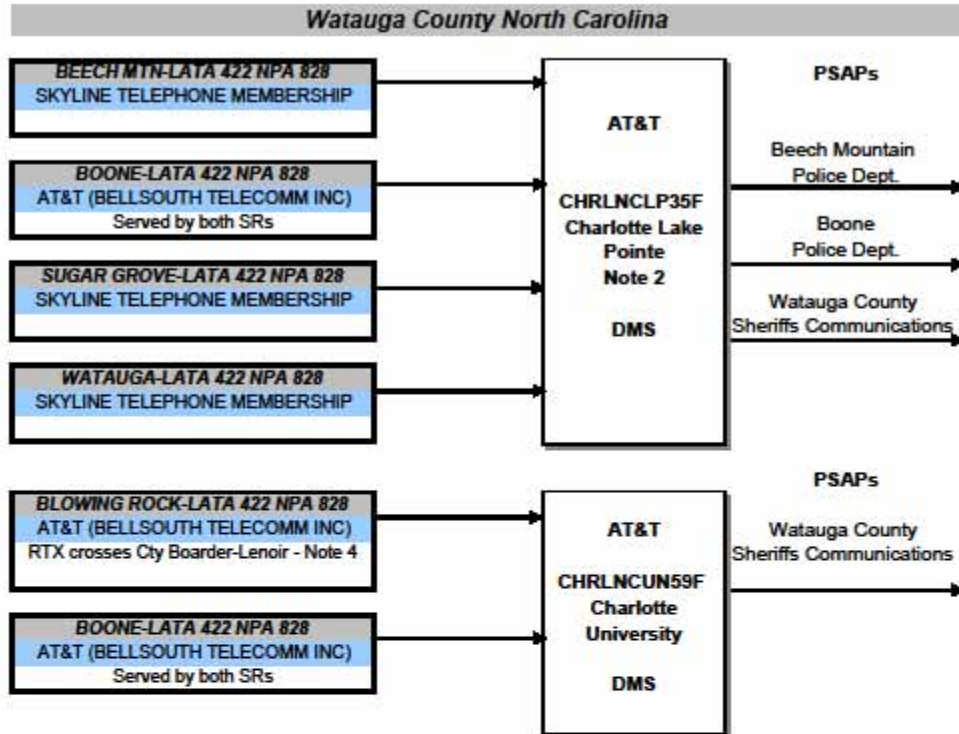


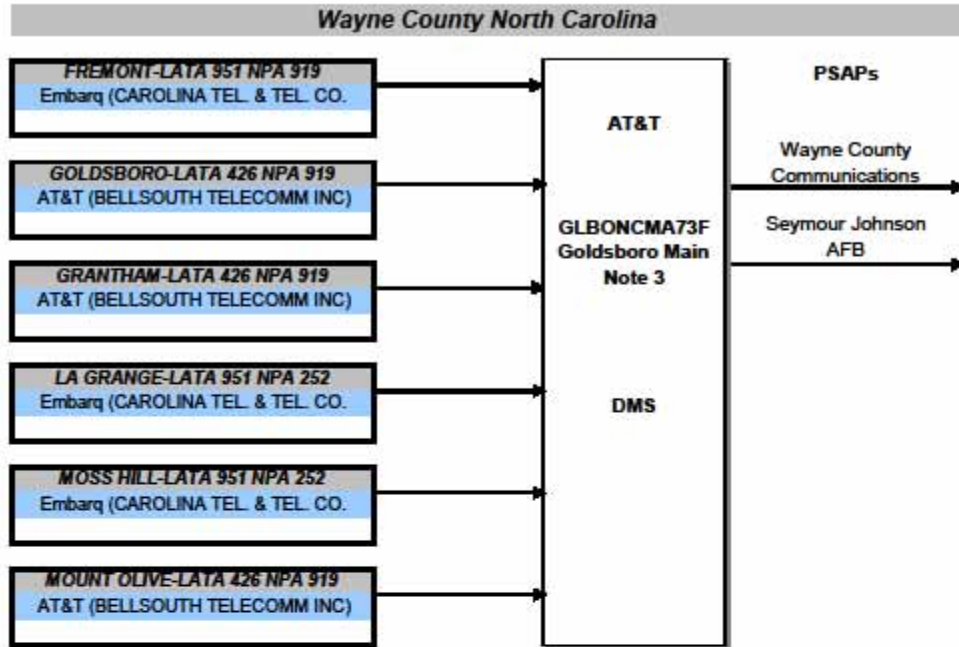


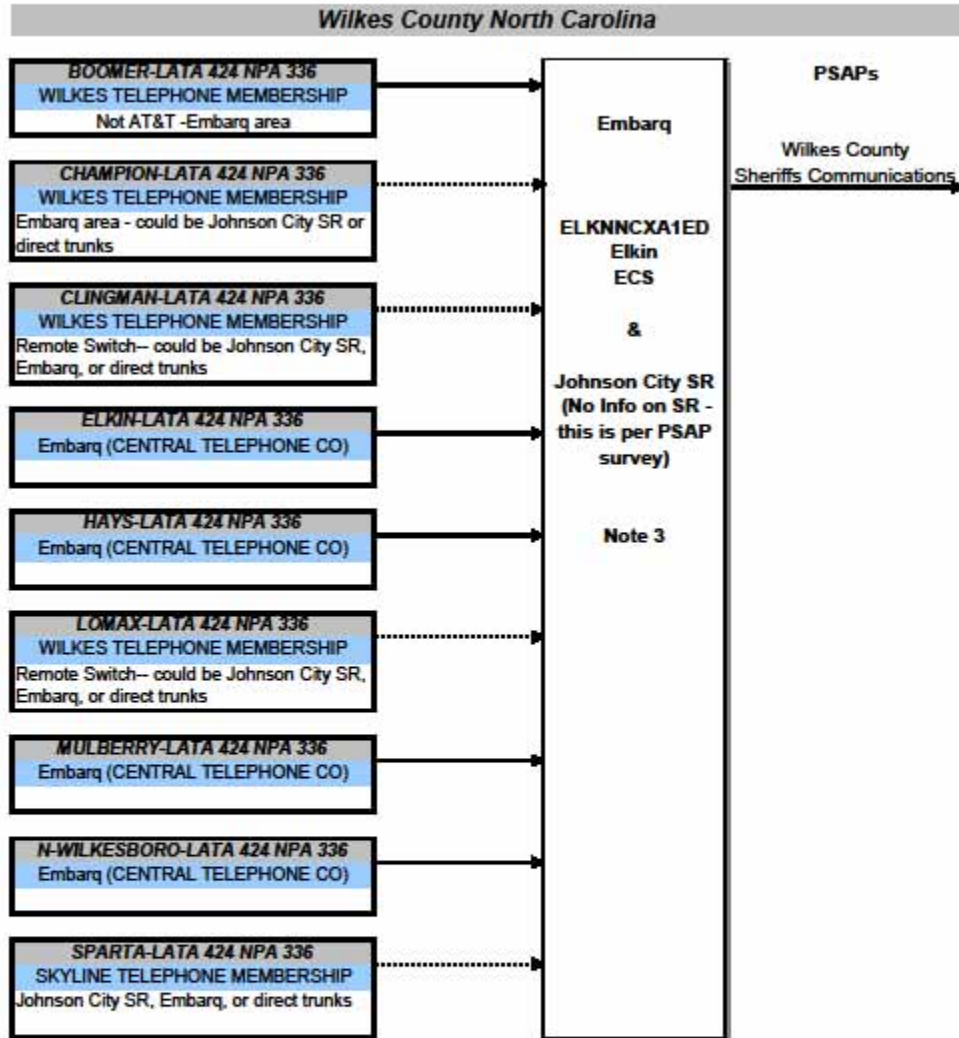


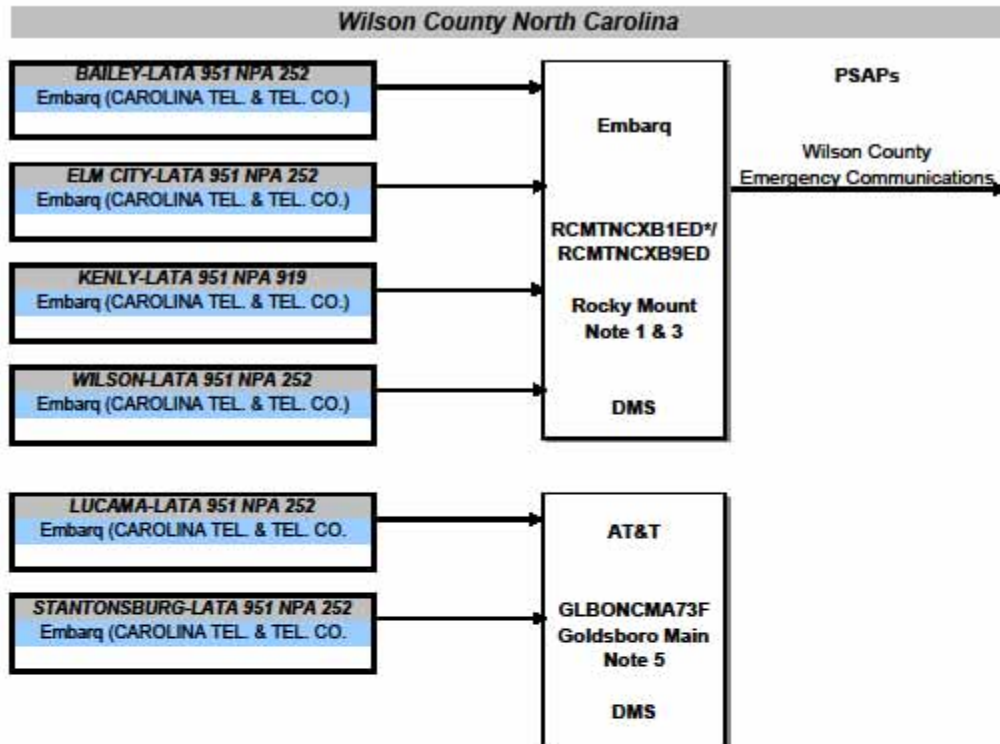


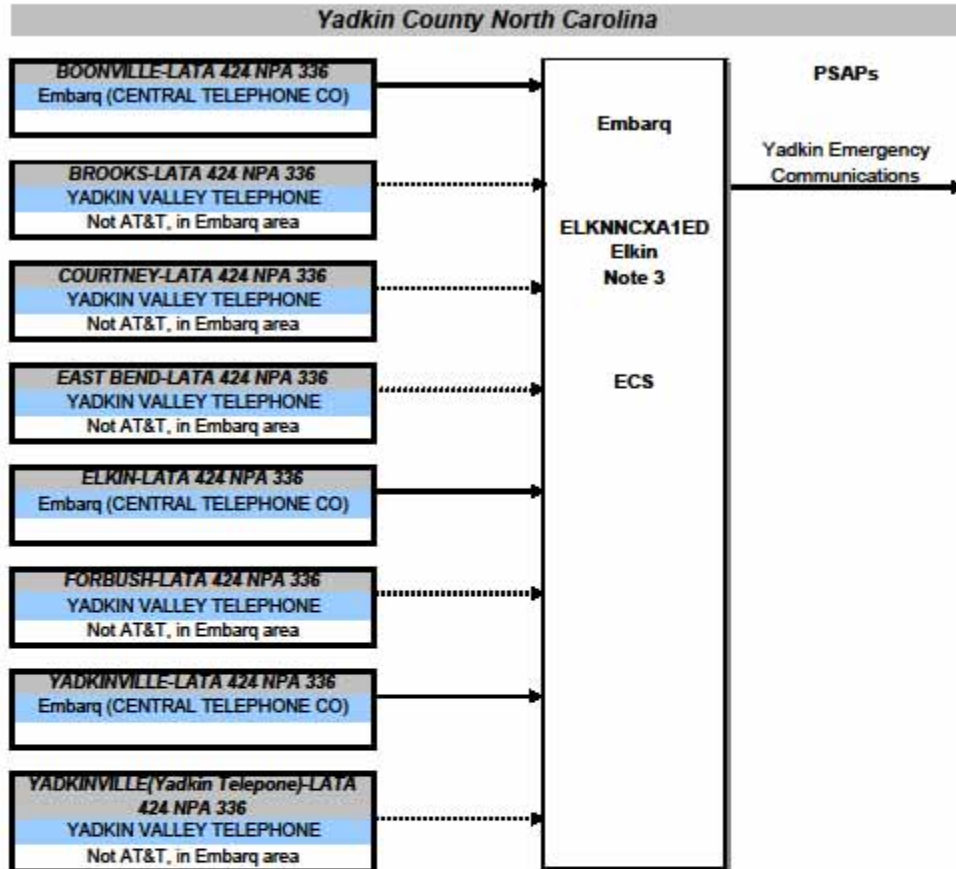


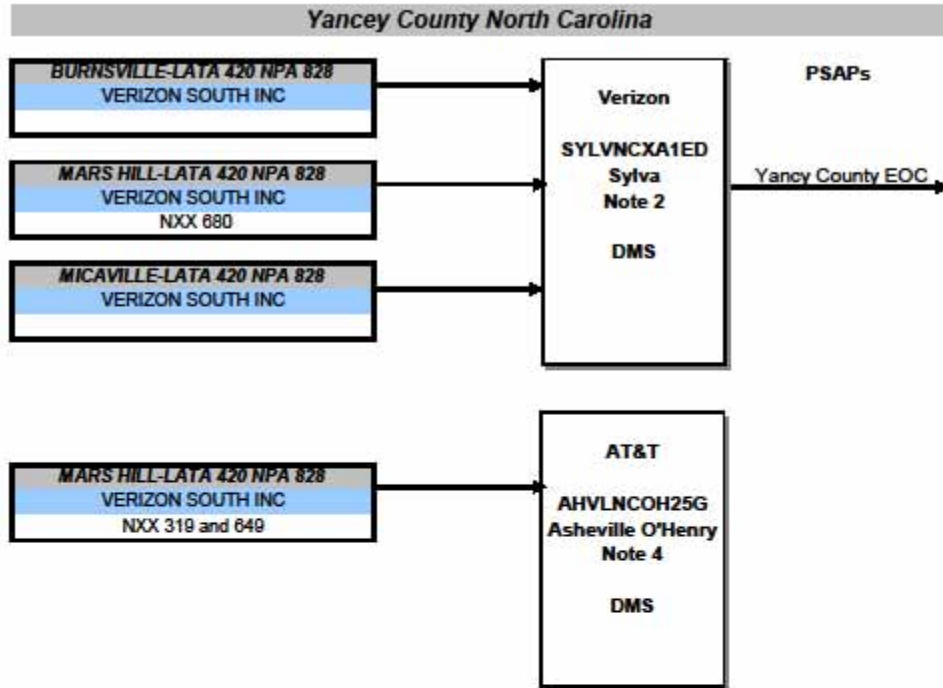












North Carolina Rate Centers			
LATA 420	LATA 422	LATA 424	LATA 426
ANDREWS	ALBEMARLE	ADVANCE	ANGIER
ARDEN	ALTON	ANDERSON	BROADWAY
ASHEVILLE	ANSONVILLE	ASHEBORO	CARY
BAKERSVILLE	BADIN	BADIN LAKE	CARY-RSRCH TRNGL PRK
BARNARDSVILLE	BANNER ELK	BALDWIN	CHAPEL HILL
BLACK MOUNTAIN	BEECH MOUNTAIN	BEULAH	CLAYTON
BREVARD	BELMONT	BISCOE	CREEDMOOR
BRYSON CITY	BESSEMER CITY	BOOMER	DURHAM
BURNSVILLE	BETHLEHEM	BOONVILLE	FUQUAY VARINA
CANTON	BLOWING ROCK	BROOKS	GOLDSBORO
CASHIERS	BOONE	BURLINGTON	GRANTHAM
CHEROKEE	CAROLEEN	CANDOR	HILLSBOROUGH
CLYDE	CATAWBA	CHAMPION	KNIGHTDALE
CULLOWHEE	CHARLOTTE	CHURCHLAND	MOUNT OLIVE
ENKA CANDLER	CHERRYVILLE	CLINGMAN	OLIVIA
FAIRVIEW	CHINA GROVE LANDIS	COURTNEY	RALEIGH
FONTANA VILLAGE	CLAREMONT	CRESTON	SANFORD
FRANKLIN	CLEVELAND	DANBURY	SELMA
GARDEN CITY	CONCORD	DENTON	WAKE FOREST
GLNWOOD PRVDNCE	COOLEEMEE	EAST BEND	WENDELL
HAYESVILLE	DAVIDSON	EDEN	ZEBULON
HENDERSONVILLE	DENVER	ELKIN	
HIGHLANDS	ELLENBORO	FARMER	
HOT SPRINGS	FOREST CITY	FORBUSH	
LAKE LURE	GASTONIA	GIBSONVILLE	
LEICESTER	GOOSE CREEK	GLADE CREEK	
MAGGIE VALLEY	GRANITE FALLS	GREENSBORO	
MARION	GRANITE QUARRY RCKWL	HAYS	
MARS HILL	GROVER	HIGH POINT	
MICAVILLE	HARMONY	JACKSON CREEK	
MURPHY	HARRISBURG	JULIAN	
OLD FORT	HEMBY BRIDGE	KERNERSVILLE	
ROBBINSVILLE	HICKORY	KIMESVILLE	
SALUDA	HILDEBRAN	KING	
SEVIER	HUNTERSVILLE	LANSING	
SUIT	IJAMES	LEVEL CROSS	
SWANNANOA	INDIAN TRAIL	LEWISVILLE	
SYLVA	KANNAPOLIS	LIBERTY (RANDOLPH)	
WAYNESVILLE	KINGS MOUNTAIN	LOMAX	

North Carolina Rate Centers			
LATA 420	LATA 422	LATA 424	LATA 426
WEAVERVILLE	LATTIMORE	MADISON	
	LAWNDALE	MEBANE	
	LENOIR	MONTICELLO	
	LILESVILLE	MOUNT AIRY	
	LINCOLNTON	MOUNT GILEAD	
	LOCUST	MULBERRY	
	LOWELL	NATHANS CREEK	
	MAIDEN	NORTH WILKESBORO	
	MARSHVILLE	OLDTOWN	
	MATTHEWS	PILOT MOUNTAIN	
	MOCKSVILLE	PISGAH	
	MONROE	PROSPECT HILL	
	MOORESVILLE	QUAKER GAP	
	MORGANTON	RAMSEUR	
	MORVEN	RANDLEMAN	
	MOUNT HOLLY	RED BRUSH	
	MOUNT PLEASANT	REEDS	
	MOUNTAIN VIEW	REIDSVILLE	
	NEW HOPE	ROARING GAP	
	NEW LONDON	ROXBORO	
	NEW SALEM	RUFFIN	
	NEWLAND	RURAL HALL	
	NEWTON	SANDY RIDGE	
	NORWOOD	SAXAPAHAW	
	OAKBORO	SCOTTVILLE	
	PEACHLAND		
	POLKTON	SEAGROVE	
	PINEVILLE	SHOALS	
	RUTHERFORDTON	SOUTHMONT	
	SALISBURY	SPARTA	
	SHELBY	STANLEYVILLE	
	SHERRILLS FORD	STATE ROAD	
	SOUTH CROWDERS CRK	STONEVILLE	
	SPRUCE PINE	SUMMERFIELD	
	STANLEY	THOMASVILLE	
	STATESVILLE	TIMBERLAKE	
	STONY POINT	TROY	
	SUGAR GROVE	WALKERTOWN	
	TAYLORSVILLE	WALNUT COVE	
	TROUTMAN	WELCOME	
	UNION GROVE	WEST END	
	VALDESE	WEST JEFFERSON	
	WADESBORO	WESTFIELD	
	WATAUGA	WINSTON SALEM	

North Carolina Rate Centers			
LATA 420	LATA 422	LATA 424	LATA 426
	WAXHAW	YADKINVILLE	
	WINGATE	YANCEYVILLE	
		ZEPHYR	

North Carolina Rate Centers			
LATA 428	LATA 949	LATA 951	Non-NC LATAs
ACME	ABBOTTSBURG	AHOSKIE	GATEWOOD 250 VA
ATKINSON	ABERDEEN	ATLANTIC	MILTON 250 VA
BOILING SPNG LKS	BENNETT	AULANDER	KNOTTS ISLND 252 VA
BOLIVIA	BENSON	AURORA	COLUMBUS 430 SC
BURGAU	BEULAVILLE	AYDEN	GREEN CREEK- 430 SC
CAROLINA BEACH	BLADENBORO	BAILEY	TRYON 430 SC
CASTLE HAYNE	BONLEE	BATH	LIBERTY (CHRKEE) 472 TN
ELLERBE	CARTHAGE	BAYBORO	WATERVILLE- 474 TN
FAIR BLUFF	CHADBOURN	BEAUFORT	
FAIRMONT	CLARKTON	BELHAVEN	
GIBSON	CLINTON	BETHEL	
HAMLET	COHARIE	BUXTON	
HOLDEN BEACH	COLERIDGE	COINJOCK	
LAUREL HILL	CYPRESS CREEK	COLERAIN	
LAURINBURG	DUNN	COLUMBIA	
LONG BEACH	DUNN-CUMBERLAND	CONWAY	
LONGWOOD	ELIZABETH TOWN	CRESWELL	
LUMBERTON	FAISON	EDENTON	
PEMBROKE	FAYETTEVILLE	ELIZABETH CITY	
ROCKINGHAM	FOUR OAKS	ELM CITY	
ROWLAND	GARLAND	ENFIELD	
SCOTTS HILL	GOLDSTON	ENGELHARD	
SEASIDE	HARRELLS	FARMVILLE	
SHALLOTTE	HERRING	FOUNTAIN	
SOUTHPORT	HIGHFALLS	FRANKLINTON	
WAGRAM	HOLLY RIDGE	FREMONT	
WILMINGTON	JACKSONVILLE	GATESVILLE	
WRIGHTSVILLE BCH	KELLY	GREENVILLE	
	KENANSVILLE	GRIFTON	
	LAKE WACCAMAW	HALIFAX	
	LILLINGTON	HAMILTON	
	LISBON	HAVELOCK	
	MAXTON	HENDERSON	
	MAYSVILLE	HERTFORD	
	NEWTON GROVE	JACKSON	
	PARKTON	KENLY	
	PINEBLUFF	KILL DEVIL HILLS	

North Carolina Rate Centers			
LATA 428	LATA 949	LATA 951	Non-NC LATAs
	PINEHURST	KINSTON	
	PITTSBORO	LA GRANGE	
	PRINCETON	LEWISTON	
	RAEFORD	LITTLETON	
	RED SPRINGS	LOUISBURG	
	RICHLANDS	LUCAMA	
	ROBBINS	MAMIE	
	ROSE HILL	MANTEO	
	ROSEBORO	MARSHALLBERG	
	SILER CITY	MOREHEAD CITY	
	SIX RUN	MOSS HILL	
	SMITHFIELD	MOYOCK	
	SNEADS FERRY	MURFREESBORO	
	SOUTH RIVER	NASHVILLE	
	SOUTHERN PINES	NEW BERN	
	ST PAULS	NEWPORT	
	SWANSBORO-ONSLW	NORLINA	
	SWANSBORO-W CRTRT	OCRACOE	
	TABOR CITY	ORIENTAL	
	TOPSAIL ISLAND	OXFORD	
	VASS	PIKE ROAD	
	WALLACE	PINETOPS	
	WARSAW	PINETOWN	
	WHISPERING PINES	PINEY WOODS	
	WHITE OAK	PINK HILL	
	WHITEVILLE	PLYMOUTH	
		POLLOCKSVILLE	
		RICH SQUARE	
		ROANOKE RAPIDS	
		ROBERSONVILLE	
		ROCKY MOUNT	
		ROXOBEL	
		SCOTLAND NECK	
		SEABOARD	
		SHILOH	
		SIDNEY	
		SNOW HILL	
		SOUTH MILLS	
		SPRING HOPE	
		STANTONSBURG	
		SUNBURY	
		SWANQUARTER	
		TARBORO	
		TRENTON	

North Carolina Rate Centers			
LATA 428	LATA 949	LATA 951	Non-NC LATAs
		VANCEBORO	
		VIRGILINA	
		WARRENTON	
		WASHINGTON	
		WAVES	
		WEEKSVILLE	
		WELCH	
		WELDON	
		WHITAKERS	
		WILLIAMSTON	
		WILSON	
		WINDSOR	
		WINTON	
		WOODLAND	
		WOODVILLE (PRQMNS)	